

MEANINGS ASSIGNED TO DENGUE BY PRIMARY HEALTH CARE NURSES

SIGNIFICADOS DA DENGUE PARA ENFERMEIROS DA ATENÇÃO PRIMÁRIA À SAÚDE

SIGNIFICADOS DEL DENGUE PARA LOS ENFERMEROS DE ATENCIÓN PRIMARIA DE SALUD

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ABSTRACT

Introduction: dengue remains an important public health problem and continues to impact the population's economic, social and health contexts. **Objective:** this study's objective was to identify the meanings of dengue from the perspective of primary health care nurses from a town in the south of Minas Gerais, Brazil. **Method:** this qualitative study is based on the Theory of Social Representations. The fieldwork included individual interviews held with 17 nurses working in *Unidades Básicas de Saúde* (UBS) [Primary Health Care Units] and *Equipes da Estratégia Saúde na Família* (ESF) [Family Health Strategy] from a town in Minas Gerais, Brazil, between June and July 2015. The reports were recorded, transcribed and later analyzed and presented using the Discourse of the Collective Subject (DCS). **Results:** the following meanings regarding dengue emerged: immense discomfort, public health problem, carelessness people, consequence of lack of education, viral disease, concern and fear, severe disease, disease caused by a mosquito bite, epidemics, and other meanings. The meaning that was most frequently reported was dengue as a public health problem. **Discussion:** the symbolic and figurative results reveal how polysemic and multifaceted the topic of dengue is. It was an important opportunity for the collective subject, composed of Primary Health Care nurses, to express and represent the meaning it assigns to dengue. **Conclusion:** Identifying the meanings health workers assign to dengue is important to understanding its causality and combat it as a current public health/collective health problem.

Keywords: Dengue; Public Health; Qualitative Research; Nurses; Psychology, Social.

RESUMO

Introdução: a dengue permanece como um importante problema de saúde pública e segue impactando o contexto econômico, social e de saúde da população. **Objetivo:** o objetivo desta pesquisa foi de conhecer os significados da dengue para enfermeiros da Atenção Primária à Saúde de um município sul mineiro. **Método:** trata-se de um estudo qualitativo fundamentado na Teoria das Representações Sociais. O trabalho de campo contemplou entrevistas individuais aos 17 Enfermeiros das Equipes de Saúde da Família e Unidades Básicas de Saúde de um município de Minas Gerais, entre junho e julho de 2015. Os depoimentos foram gravados, transcritos e, posteriormente, analisados e apresentados por meio do método do Discurso do Sujeito Coletivo. **Resultados:** os significados da dengue emergidos foram: desconforto enorme, problema de saúde pública, descuido das pessoas, consequência da falta de educação, doença viral, preocupação e medo, doença grave, doença causada pela picada do mosquito, epidemia, e outros significados. O significado que apresentou maior grau de compartilhamento das ideias foi o da dengue como um problema de saúde pública. **Discussão:** os achados simbólicos e figurativos emergidos evidenciam o quão polissêmico e multifacetado é o tema dengue. Foi uma oportunidade importante para o eu coletivo, constituído pelos enfermeiros da Atenção Primária à Saúde do referido Município se manifestar e representar o que a dengue significa para ele. **Conclusão:** conhecer os significados desta doença para os profissionais ora abordados é importante para a compreensão da sua causalidade e para o seu enfrentamento como problema de saúde pública/saúde coletiva na atualidade.

Palavras-chave: Dengue; Saúde Pública; Pesquisa Qualitativa; Enfermeiras e Enfermeiros; Psicologia Social.

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RESUMEN

Introducción: el dengue sigue siendo un importante problema de salud pública y continúa impactando el contexto económico, social y de salud de la población. **Objetivo:** el objetivo de esta investigación fue conocer el significado del dengue para los enfermeros de atención primaria de salud de una ciudad del sur del estado de Minas Gerais. **Método:** estudio cualitativo basado en la teoría de las representaciones sociales. El trabajo de campo incluyó entrevistas individuales con 17 enfermeros de los equipos de salud familiar y de las unidades básicas de salud de una ciudad de Minas Gerais, entre junio y julio de 2015. Las declaraciones fueron grabadas, transcritas y luego analizadas y presentadas a través del método del discurso del sujeto colectivo. **Resultados:** los significados del dengue que surgieron fueron: gran incomodidad, problemas de salud pública, descuido de las personas, consecuencia de la falta de educación, enfermedad viral, preocupación y miedo, enfermedades graves, enfermedad causada por la picadura del mosquito, epidemia, entre otros. El significado que más ideas permitió compartir fue el dengue como un problema de salud pública. **Discusión:** los hallazgos simbólicos y figurativos que surgen muestran cuán polisémico y multifacético es el tema del dengue. Fue una oportunidad importante para el yo colectivo, formado por los mencionados enfermeros, para expresarse y representar lo que el dengue significa para ellos. **Conclusión:** es importante conocer los significados de la enfermedad para estos profesionales para entender su causalidad y enfrentarla como un problema de salud pública / salud colectiva en la actualidad.

Palabras clave: Dengue; Salud Pública; Investigación Cualitativa; Enfermeras y Enfermeros; Psicología Social.

INTRODUCTION

Despite the various attempts to control dengue, it continues to reemerge, negatively impacting the population's social, economic and health contexts. Epidemics, once recurring in the tropical regions of Asia, Africa and the Americas, have also been observed in extra-tropical areas of developed countries, such as France, Croatia, Portugal, Spain, Japan and the United States.¹⁻⁷ It is estimated that from 2.5 to 2.9 billion people worldwide are at risk of being infected by dengue.^{8,9}

This epidemiological context, in which dengue remains an important public health problem, coupled with an interest in non-biological determinants/conditioners affecting the maintenance of health and the production of this disease,¹⁰ motivated this study. Vector-borne diseases present a close interaction between vector, host, and pathogenic agent, but one cannot ignore that such interactions occur both within a physical and biological context and a historical, social and cultural context. Hence, social and human sciences play an important role in understanding diseases like dengue, whether supporting the management of the general pathogenesis or controlling the arthropods.¹¹

Considering the dynamics of the health-disease continuum, we believe that social research,¹² by addressing human beings in society, their relationships and institutions, history and symbolic productions, provides an important framework to support understanding of complex phenomena such as the persistence of dengue in a highly urbanized world. In this sense, social studies in the health field¹² are very much welcomed and that is why we adopted the theory of social representations.¹³

The Theory of Social Representations (TSR), an important reference that was rescued from the 19th century by the psychologist Serge Moscovici in the 1960s,¹⁴ has been increasingly adopted by studies addressing the psychosocial aspects of the health-disease continuum in the lives of diverse social groups.¹⁵ Social Representations (SR) were introduced in Brazil in the 1970s together with social psychology, the approach adopted in this study.¹⁶

In the case of dengue, identifying how the disease is collectively symbolized or represented seems to support understanding what and how society thinks of the phenomenon. Considering that the TSR enables understanding why people do what they do, it is an interesting arsenal for discussing the meaning of dengue. From this behavioral perspective, SR provides a valuable contribution to the development of behaviors, once SR guides relationships and communication within a society.¹⁷

The literature shows that the use of the Discourse of the Collective Subject (DCS) in SR studies addressing dengue has been used both for academic and operational purposes in planning collective health actions. There are, however, few studies adopting this approach, which reinforces the relevance of SR of investigating dengue using DCS in the various segments of the community.¹⁸

The decision to address Primary Health Care (PHC) nurses as the social actors of this process of acquiring knowledge regarding dengue derives from one of the author's interest in the theme and also his commitment to a segment of the population with which he has great professional, social and academic identification. In addition to his personal curiosity, the choice for these participants and this study's social fields is justified by the possibility of addressing a profession, the reports and experience within health services can support understanding organizational problems faced in the care delivered to individuals and the collective during dengue epidemics.

Additionally, TSR supports the understanding that the SR of various individuals working in healthcare services do not always emerge from the ideas shared within each profession in isolation. During the historical, cognitive and social interpretation of a real context, the representations of nurses

may be influenced by their scientific knowledge, personal and empirical experiences, and by daily contacts, interactions and communication, exchanging common-sense information with the social sphere to which they belong (social facet).

In this sense, this study problem is the fact that dengue still resists the various attempts to control it and remains negatively impacting the population's social and health contexts. Considering that combating dengue is closely related to individual behavior and collective actions, dialectically, the question asked was: What meanings do PHC nurses assign to dengue? This study's objective was to identify the meanings PHC nurses from a town in *Minas Gerais*, Brazil assign to dengue.

Therefore, this study presents the values and symbols held by the collective subject of PHC nurses regarding dengue. Such meanings and symbols permeate health services and reveal knowledge regarding how the disease is combated, because these are frontline workers.

METHOD

This is a qualitative social study,¹² with a social representation approach.¹³ The actors/social agents addressed here refer to all 17 nurses working in the Unidades Básicas de Saúde (UBS) [Primary Health Care Units] and *Equipes da Estratégia Saúde na Família* (ESF) [Family Health Strategy], which is the social field of this study, and which are part of the PHC network of a town in the south of *Minas*, Brazil. According to the 2010 demographic census, this town had 73,774 residents, a territorial area of 850.446km², and a demographic density of 86.75 inhabitants per km².¹⁹

In regard to the selection of participants and sampling, there was no need to determine the number of nurses to be interviewed or sample loss, considering this is a qualitative study and its sample population included all professionals working in PHC. The following inclusion criteria were used: being a nurse and working in the PHC of the aforementioned town. Exclusion criteria were: answering the recorded interview by addressing other aspects than the one under study and that did not correspond to its meanings. The saturation criterion was not used in this study because it is not recommended by the DSC method.¹³

Semi-structured and individual interviews were used to collect data. An open-ended question asking about the meanings of dengue was posed because this type of question is a privileged communication technique that allows participants a great opportunity to express opinions.^{12,13} Each worker was individually approached in their workplace, in a private room and on previously scheduled days and times

in order to minimize interference in the participants' work processes.

A form containing two parts was developed to collect data. The first part addressed the participants' sociodemographic data and the second part contained one open-ended question directed to the nurses. The following variables were completed in the form's sociodemographic part: audio code; interview date; acronym of reference; age; sex; time working in the service; and whether the interviewee had had dengue before. The guiding question was intended to identify what dengue means for PHC nurses and was presented as follows: - If a friend of yours asked: "what does dengue mean to you?" what would your answer be?

A pilot study was performed before data collection in which two nurses who belonged to the study population, chosen as a convenience sample, were invited to participate. This was an important step because it showed the participants correctly interpreted the questions, so that we ensured the question actually met the study objective. Since there was no need to modify the instrument, the two participants from the pilot study were considered to be part of the final study population. The individual interviews were recorded with a digital recorder, and later transcribed verbatim, without any grammatical corrections.

The DCS was used to organize, explore and analyze data. The DCS is a technique to tabulate and organize qualitative data based on the TSR^{13,14}, which through systematic and standardized procedures, enables grouping and presenting reports without reducing them to quantities.¹³

After analyzing textual data - through repeated and exhaustive, horizontal and vertical, readings of individual reports - the ideas were grouped into equal, similar or complementary ideas. Ideas were chronologically identified, as were the number of participants who contributed to each representation. The findings were then synthesized and the respective DCS were developed. The DCS were reviewed to comply with the rules of the Portuguese language.

The study was initiated after the *Secretaria Municipal de Saúde* [City Department of Health] authorized the collection of data, and the project was approved by the Review Institutional Board (CAAE 20189313.4.0000.5440, opinion report 444,929). The study resulted in a doctoral dissertation.²⁰ Before signing free and informed consent forms, the participants received clarification about the study's objectives and were assured of their rights for every step of the study.

RESULTS

The social actors who composed this study population were 17 female nurses aged 40 years old, on average. In terms

of professional experience, a median of five years working in the PHC was found, while 14 nurses (82.35%) worked in urban ESF, one (5.88%) nurse worked in a rural ESF, and the remaining two (11.76%) nurses worked in traditional UBS. Three of these interviewees (17.64%) had been affected by dengue before and 14 (82.35%) had never been affected by dengue.

The following central-synthesis ideas emerged to meet this study's objective, that is, identified the meanings held by PHC nurses regarding dengue: immense discomfort; public health problem; careless people; consequence of lack of education; viral disease; concern and fear; severe disease; disease caused by a mosquito bite; epidemic; and other meanings, presented in figure 1.

Below the DSC that concerns the meaning that more frequently emerged from the reports, that dengue is a public health problem, is highlighted. This is an opportunity for the collective self, composed of PHC nurses, to manifest and represent an example of what dengue means.

DSC OF THE CENTRAL IDEA - PUBLIC HEALTH PROBLEM

I think dengue is a public health problem; a disease that demands special attention. The greatest problem is the environment, the lack of structure; it's sanitation. We are going back to square one; no matter how hard you try to keep up with the collection of residues, garbage, some things always remain. Thinking, how is a mosquito, because of stagnant water, able to do so much damage? So, it is a public health disease because there is a lack of basic sanitation; people do not care for their own backyards; people do not allow endemic agents to enter and check their houses; it's a lack of care that cause disruption in the lives of many people. If you have dengue, you cannot simply let it go, you have to seek medical care and the family has to do its share. Not only do those affected by the disease have to worry, but everyone around also has to worry, each doing his/her share. Because the mosquito is all over, sometimes, you travel and bring it back to your city. That is, everyone is responsible for dengue; if the population, the community, does not get involved, we will not be able to control it. It is a problem that requires attention! It is a matter of public health that involves health workers and the community (Collective Subject of PHC nurses from a town in the south of Minas Gerais, Brazil).

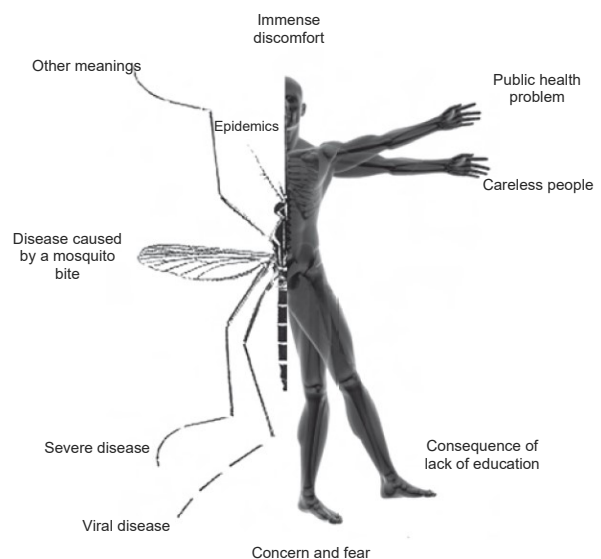


Figure 1 - Meanings of dengue, from the perspective of PHC nurses in a town in Minas Gerais, Brazil, 2015.

Source: ²¹(The illustration, a synthesis-image chosen to represent the ideas that emerged, was changed with the addition of text).

DISCUSSION

In the DSC concerning public health problem, the collective subject views dengue as a disease that requires special care and describes various micro-determinants. It indicates the importance of individuals seeking a health service if infected, and reinforces the need for all people, whether at an individual or collective level, to become co-responsible for fighting the disease: [...] It is a problem that requires attention! It is a matter of public health that involves workers and the community [...].

According to the Brazilian *Ministério da Saúde* (BR), a total of 1,438,497 cases of dengue had been reported up to Epidemiological Week No. 36 of 2015. Of these, 1,318 were classified as severe, and another 17,183 cases presented alarming signs. This figure is equivalent to an increase of 194.68% and 214.92%, respectively, in comparison to the same period of 2014. An increase in the number of deaths was also identified, from 415 deaths in 2014 to 709 through September 12th 2015.^{21,22} These figures show that fighting dengue remains a challenge for Brazilian public health.

Therefore, the fact that health workers consider dengue to be a public health problem is a positive representation, because this idea is actually consistent with the local epidemiological context. Additionally, this meaning has the potential to raise a concern and draw the attention of these social actors toward the object of study: dengue. It would be interesting if dengue was understood not only as a public health problem, but a collective health problem as well.

In terms of the work process, public health adopts traditional epidemiology instruments, normative planning, and Taylor's management principles, that is, a biological approach and conceptions of health. On the other hand, collective health uses social or critical epidemiological devices and the social sciences to study social determinations, inequalities in the health sphere, strategic/communicative planning, and participatory management.²³

Thus, an important paradigmatic change in regard to how dengue is understood and combated involves, from isolated actions on the part of the epidemiologic surveillance, sanitary surveillance or isolated special programs, which are characteristic of the public health's *modus operandi*, to an acceptance of different types of knowledge (both scientific and popular knowledge), upon which collective health is based. A combination of scientific and empirical knowledge can raise sanitary awareness and promote the implementation of intersectoral interventions on structural health determinants.²³

There is no intention to discuss the epistemological aspects of the dialectic between public and collective health. It is important, however, to draw attention to the discourse that concerns dengue as being a collective problem: [...] it involves health workers and the community [...]. The fight against dengue within the context of Brazilian sanitary reform should be coherent with this notion. According to the DSC, [...] the population should get involved [...]. Thus, considering that dengue essentially is a collective problem, a more comprehensive meaning would be: a public health problem and a collective health issue.

Note that the town where this study was conducted moved from an epidemiological context marked by low-level epidemics of dengue to a progressive and hyper-epidemic level of incidence, such as the one observed in 2015. Thus, in addition to a concern over the effects of the dengue virus (DENV) on hosts, further discussing social, behavioral, and organizational issues involving dengue epidemics throughout Brazil is very appropriate.

A potential explanation for the timid representations manifested by the PHC nurses concerning dengue and its control refers to the fact that these workers were not familiar with such expressive dengue epidemics in the town. Additionally, the individual reports convey the specificity and complexity that collective health imposes when working with a large number of ministry-level programs that focus on different diseases and target populations.

The fact that PHC units seldom have contact with dengue, primarily because of the large number of health practices nurses develop in the daily routine of a PHC service, seems to be aggravated by a lack of a municipal strategic plan to provide care to these patients. Such a plan would be extremely

important to organizing the flow of the population in the facilities within the health system and facilitate the early access of individuals to services, especially during outbreaks.

In the interviews, the care provided to people with dengue in the PHC units was represented as a war scenario. The main difficulties presented in the reports involve inappropriate physical structure and insufficient equipment and material resources available in 2015 to satisfactorily meet the needs of a large number of patients affected with dengue.

Such a context, however, does not differ from what is observed in Brazilian medium- and large-sized cities. The current challenge faced by municipal health systems is actually to improve the model of care delivery to give priority to preventive actions and organize them according to PHC units.²⁴ Health workers in most Brazilian cities have to juggle in order to balance scheduled appointments and spontaneous demands by working with a weekly and monthly calendar.

The mismatch between demand and service capacity is aggravated in periods of outbreak in which the routine of health units is completely changed.²⁴ The literature shows that depending on the number of cases, almost all other activities that are usually scheduled in advance are reduced.²⁴ The town where this study was conducted established PHC units would be the preferred entry way for people who appear to have dengue,²⁵ seeking to equalize care delivery and improve referrals throughout the network, the impact of which has not been assessed yet.

In regard to strategies to prevent dengue, the city's department of health announced a plan in January 2016 to intensify actions intended to eliminate *Aedes aegypti* breeding sites. The proposal was to visit all properties in the town, a task force that gathered 32 Endemic Control Agents and 110 Community Health Agents. In an attempt to curb the proliferation of the vector mosquito, this initiative also included work to sensitize residents in order to prevent and identify potential breeding sites.²⁵

Finally, we should bear in mind that, in addition to the epidemiological discussion regarding this phenomenon, this study was also intended to highlight the importance of interpreting the meanings of dengue in light of TSR. The reports of PHC nurses also conveyed SR traits of other workers who compose the PHC's socially structured field, rather than only the collective meanings of the socially structured field of the nursing profession.

CONCLUSION

The conclusion, based on the amount of ideas shared by the social field under study, is that dengue and combating it were socially represented by PHC nurses mainly as a public

health problem, the control of which is hindered by a lack of awareness on the part of the population and facilitated by guidance and sensitization and by partnerships.

The meanings of dengue, obtained through the DSC method, were: Immense discomfort; Public health problem; Careless people; Lack of education; Viral disease; Concern and fear; Severe disease; Disease caused by a mosquito bite; Epidemics; and Other meanings.

Identifying the meanings of dengue is important to understanding its causality and to fighting it as a public health/collective health problem. In this sense, the theoretical-methodological framework used, that of TSR, enabled achieving the study's objective.

These symbolic and figurative findings present in the routine of PHC services reveal how polysemic and multifaceted the topic of dengue is, which implies new reflections and interventions based on the meanings provided by nurses working in the public health network of a Brazilian town. This study enabled accessing values and symbols of the collective subject of PHC nurses regarding dengue, which permeate the intelligence of health services because these are the frontline staff working to fight the disease.

The community and municipal approach adopted in this study presents a limitation, because it does not allow for generalizations; that is, one cannot assume that the SR that emerged at a local level are socially shared in a similar manner in other contexts comprising larger geographical areas. In this sense, further studies need to be conducted to clarify the scope and extension of the social representations of nurses regarding dengue at the national and international levels.

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