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The right to water and sanitation as a tool for health promotion of vulnerable groups

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Abstract *The concept of health promotion, which is based on social determinants, is aligned with principles of human rights such as social participation, accountability, transparency and non-discrimination. The Human Right to Water and Sanitation (HRWS) was approved in 2010 by the United Nations General Assembly and the Human Rights Council and it aims to ensure access to water and sanitation, without discrimination, for all. This article aims to analyze how the human rights framework, and more specifically the HRWS, can be used to strengthen the health promotion of vulnerable groups. The article begins by presenting the relationship between health and human rights. It then demonstrates how the concept of social vulnerability is based on human rights and, finally, it shows the relationship between the HRWS and the promotion of the health of vulnerable groups.*

Key words *Health promotion, Human rights, Access to water, Access to sanitation, Social vulnerability*

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Introduction

Since the First International Conference on Health Promotion (held in Ottawa in 1986), the concept of health promotion, which is based on an expanded concept of health, has been developed by different actors and bringing new ways of thinking and practices. This expanded way of understanding the health-disease-care process highlights the principal role of social determinants, both in the appearance, clinical development and outcome of diseases, even in different forms of intervention. Illness has come to be understood as a process that involves biological, behavioral, cultural, economic, political, social and environmental aspects[1-3].

The concept of health promotion values the relationship between technical and popular knowledge and it proposes increased dialogue between institutions and communities. The appreciation of popular knowledge and of social participation has become one of the foundations of health promotion, which also stresses the importance of intersectoral action to face problems. Other values are now associated with the concept, such as solidarity, democracy, equality, citizenship and development[2,4]. These values, together with the encouragement of community empowerment so that they communities can take responsibility and fight for their health, as well as recognizing this as a right, are aligned with principles of human rights such as social participation, accountability, transparency and non-discrimination.

Jonathan Mann, who is a pioneer in advocating the intersection between human rights and health, has stated that "the human rights framework provides a more useful approach to analyze and respond to public health challenges than any other traditional biomedical reference that is available"[5]. For Mann, the promotion and protection of health can only be achieved in tandem with the promotion and protection of human rights[4]. According to Gruskin and Tarantola[6], when health work is linked to human rights it can identify those who are disadvantaged, as well as demonstrating if the existence of a difference in terms of a health outcome is the result of an injustice. These authors point out that "currently, human rights are designed to provide a framework for action and planning, as well as providing strong and convincing arguments about governmental responsibility; not only in establishing health services, but also to transform the conditions that create, exacerbate and perpetuate poverty, marginalization and discrimination"[6]. Consequently, using a human rights framework can help us to think about more effective actions to deal with health needs, as well as how to formulate public policies that respect the principles of human rights and are focused on the health of vulnerable groups.

According to the United Nations Human Rights Council[7,8] the theoretical framework behind the human right to water and sanitation (HRWS) is derived from other rights such as the right to an adequate standard of living, the right to physical and mental health, and the right to life and dignity. This idea originated from the International Treaty on Economic, Social and Cultural Rights and therefore it is supported legally by international human rights[7,8]. The HRWS was internationally recognized after being approved by the United Nations General Assembly in 2010 through resolution A/RES/64/292 regarding "the human right to water and sanitation"[9]. This resolution was derived from General Comment No. 15[7], which was drawn up in 2002 by the Committee on Economic, Social and Cultural Rights, and it implies legal obligations on states. Because states are responsible for ensuring access to water and sanitation without discrimination, the theoretical framework of the HRWS is an important tool to regulate water use in several countries, contributing significantly to the development and implementation of public policies[10,11].

The Joint Monitoring Program for Water Supply and Sanitation[12] estimates that 663 million people worldwide lack access to "adequate" drinking water and that 2.4 billion people have no access to "adequate" sanitation. These vulnerable groups are most affected by these problems. It is impossible to guarantee the right to a standard of living that ensures health and well-being, which is provided for in Article 25 of the 1948 Declaration of Human Rights, without ensuring access to these services. Consequently, this article analyzes how the human rights framework, and in particular the HRWS, can be mobilized to strengthen the promotion of the health of vulnerable groups. The article starts by making the link between the principles of human rights and the concept of health promotion, showing how the use of the human rights framework can transform actions that are based on charity and assistance into activities designed to promote and achieve rights. The following section discusses how the concept of social vulnerability is a rights-based approach because it recognizes individuals as being subject to rights, as well as di-

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aloguing directly with the concept of health promotion as a means to understanding and transforming social determinants. The article ends by establishing the relationship between the HRWS and promoting the health of vulnerable groups through human rights principles. The conclusion is that public policies that are designed to improve access to water and sanitation without discrimination, thereby encouraging social participation, transparency and accountability, as well as seeking equity, justice and dignity, can provide structural changes in the social determinants of the health-disease-care process of vulnerable groups.

How to articulate the connection between human rights and health?

In 1997 the United Nations launched a Blueprint for Reform, which invited all its agencies to align their projects with the concepts and principles of human rights[13,14]. The main objective was to promote the fulfilment of human rights, which had been established in the 1948 Declaration and other international instruments, especially those aimed at vulnerable and marginalized groups, who were most likely to have their rights violated. Principles such as non-discrimination, participation, transparency and accountability were intended to shape these initiatives[13,14].

The principle of non-discrimination recognizes that people have different needs due to their intrinsic characteristics or because of discrimination suffered over many years that prevents them from enjoying human rights on equal terms with others. Thus, some population groups require support from different quarters in order to achieve equality in terms of social and public benefits. The state is obliged to ensure, through legislation and public policy, that all individuals, regardless of race, age, gender, ethnicity, religion, disability and immigration status, among other features, can enjoy their rights, thereby eliminating or decreasing conditions that cause discrimination[10,13,14].

Participation and transparency are principles that allow communities to have continuous access to democratic, participatory processes at all levels. All individuals, including those who are most vulnerable, should participate in the decision-making process in a free, active and meaningful manner. For this to transpire, transparency and access to information are essential. The voices of groups that are socially weak cannot be silenced in favor of the interests of more powerful groups. Thus, the democratic process is strengthened, ensuring that the demands and opinions of all are respected[10,13,14].

In terms of responsibility, it is understood that the state has the obligation to enforce rights and that the population are the holders of those rights. When the state fails to safeguard established rights then people should have the right to justice. There are several ways to monitor services so that violations can be detected and corrected, for example, complaint mechanisms at various levels, from the local to the international. Social movements play a central role in this monitoring and they can demand that states fulfill their obligations[10,13,14].

Accordingly, the inclusion of a human rights framework in policies and programs, as well as in projects and actions, means that the focus of some activities, which were previously based on charity and assistance, can be transferred to promote and achieve rights. This helps to build the capacity of communities, i.e. turning them into the holders of rights, helps those communities to fight for their rights, and also reminds officials that they are required to assume their responsibilities. By articulating these human rights principles, together with the concept of health promotion, a significant adherence is achieved because social participation, without discrimination, is one of the key tools to empower individuals and communities to fight for the structural conditions which promote their health.

According to Gruskin and Tarantola[6], the manner in which the link between health and human rights is structured can be divided into the following four categories: advocacy, legislation, policies and programs.

Advocacy is the use of the language of rights to promote social mobilization, in order that society defends political changes. Consequently, it is important that different actors, such as activists, policy makers and academic professionals join together with the common goal of empowering and assisting in community organization so that communities themselves are able to pressure governments to change. Thus, it is necessary to adapt national and international human rights standards to meet the needs of communities[6,10,13].

Legislation, or the use of the legal system, entails utilizing human rights to make governments and the private sector legally responsible, and to make them comply with the obligations that are set out in international treaties that may impact upon welfare and better health conditions. In this case, governments would have a legal responsibil-

ity not to violate health-related rights, thereby respecting and defending such rights as well as protecting the population. In respecting such rights, the state prevents individuals being denied access to any service that is intended to improve health without a suitable alternative being provided, and the state also avoids any action that may result in the abuse of human rights. Furthermore, by protecting these rights the state prevents non-state actors interfering with the performance of such rights. National and international courts and tribunals could be used to solve any problems that might arise in the context of the promotion and protection of these rights[6,10,13].

The system of *public policies* entails the adoption of human rights norms and standards by the agencies that formulate national and international policies. Such action enables the strategies that are developed, especially from the perspectives of health, economy and development, to become referential parameters for human rights. Thus, national and international organizations would formulate approaches to health that are based on rights[6,10,13].

The *programmatic* system involves the implementation of rights through health programs. In this approach, the design, development, monitoring and evaluation of such programs is centered on the principles of human rights. Communities participate in all these phases, in a non-discriminatory manner. In addition, all actions should be transparent, indicating those who are legally responsible for the results of programs and the non-violation of rights. Thus, those who the holders of rights, and also those who are responsible for enforcing those rights, are identified[6,10,13].

It is important to note that actions and programs that are developed which are based upon the standard of human rights should take into account the following four important factors: availability, accessibility, acceptability and quality[6,10]. Availability means that premises, items and services related to health are available in sufficient quantity to meet the needs of the population. Moreover, these resources should be accessible to all, in a non-discriminatory manner, i.e. age, gender, disability, ethnicity, social class etc should not prevent access to services. Apart from the factor of physical accessibility, affordability should also be taken into account; in other words, health items and services should be affordable to all. Another important point to consider is that the acceptability of all services should be culturally appropriate, respecting the cultural issues of each individual and being sensitive to gender needs. Finally, the technical quality of what is offered should be appropriate to promoting a high standard of health. These factors are applicable to any approaches related to economic, social and cultural rights, including the right to water and sanitation, and there is a clear parallel between the right to health and these general human rights.

Thus, the link between health and human rights aims, above all, for the attainment of a high standard of health that is based on justice, transparency, equity and dignity for all, without discrimination, encouraging community participation and indicating those who are responsible for the results of actions. Furthermore, the human rights framework helps to identify potential situations of social vulnerability.

The concept of social vulnerability as a rights-based approach

The theoretical framework of social vulnerability originated in international law, particularly in the field of universal human rights[3,15]. Mann[5] has argued that the relationship between public health and human rights was strengthened during the first decades of the fight against HIV/AIDS. During that period it became clear that discriminatory actions were ineffective in containing the pandemic and they also highlighted the problems of social vulnerability related to the illness. Therefore, the concept of social vulnerability resulted from the intersection between the political activism of social movements against discrimination resulting from actions to prevent HIV/AIDS, and the fight for human rights[3,5,15].

The first actions designed to prevent HIV/AIDS were focused on sexual abstinence and the isolation of the risk groups that had been identified at that stage, i.e. homosexuals, Haitians, hemophiliacs and heroin users. These actions caused social and health-related isolation, creating stigma and prejudice, and they were not effective to contain the epidemic. Subsequently, new actions were initiated, which were based on the concept of risky behavior. In principle, it was believed that educational activities that stimulated safe practices would be able to slow the progression of the disease. However, it was found that these actions also failed to deliver the expected results and the disease spread, especially among socially-weak groups such as women and the poor. Thus, social movements, especially women, brought to light important issues embedded in the concept of empowerment. Protective behavior does not simply depend on the dyad "infor-

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mation and will", among other things it depends upon access to cultural, economic, political and social resources, which are unequally distributed between social groups. Actions solely based on risky behavior simply increased the culpability of the individual for the failure to carry out safe practices. As a result, in the late 1980s and early 1990s there were new proposals for preventive actions that did not just focus on individuals but which were designed to achieve structural changes in society. Since then, researchers, activists and professionals began to try to understand how social, economic, political and cultural factors influenced risky practices[3,15,16].

According to Ayres et al.[15], the concept of vulnerability in the health field is related not only to individual aspects, but also to collective, contextual and programmatic factors, which lead to increased susceptibility to disease. Individuals are not exposed to illness in a homogeneous manner and changes to daily practices do not depend solely on individual will. Different contexts are decisive for the susceptibility of individuals to illnesses. Therefore, it is important to identify the most vulnerable segments of the population, not in terms of identity, as occurred in the beginning of the fight against HIV/AIDS, but regarding the social position that they occupy[16,17].

The framework of vulnerability also evaluates whether the degree of access to resources, at all levels, can protect individuals against various diseases, as well as influencing outcomes, since the way in which interventions are organized and operated is also influenced by the context[3,15,16]. The concept of social vulnerability dialogues with health promotion because it also seeks to understand and transform the social determinants of the health-disease-care process. It recognizes that each individual is subject to rights, without discrimination, and that the social and cultural aspects that they experience expose them, to a greater or lesser degree, to illness. Furthermore, it stresses the importance of understanding how governments regulate, respect and protect rights, and how and when social conditions requires specific actions which can deal with the stigma and discrimination that contribute to perpetuate social inequality and increase vulnerability[3,15,18].

Consequently, it can be considered that the concept of vulnerability is based on rights because it recognizes individuals as subject to the law and it also recognizes the responsibility of governments to ensure that everyone, without discrimination, has access to resources that can ensure an adequate standard of health[3]. "Social groups that do not have their rights respected and guaranteed have worse health profiles and worse levels of suffering, disease and death"[3]. Consequently, where there is more direct infringement of human rights, there is greater vulnerability to health problems.

The human right to water and sanitation: perspectives for the health of vulnerable groups

The recognition that water is a key element in ensuring the basic needs of human beings was initially established in 1977 during the United Nations Conference on Water, which was held in Mar Del Plata, Argentina. The action plan developed during that conference determined that all people, regardless of economic and social status, had the right to access to drinking water in sufficient quantity and of adequate quality to ensure their basic needs. Since then, there have been several action plans that have recognized access to water and sanitation as a human right. In 2002, the UN Committee on Economic, Social and Cultural Rights issued General Comment No. 15[7] on the human right to water. According to the Committee, the right to water falls within the right to a life with quality, and it is closely related to the rights to health, food and adequate housing, which are provided for in the International Covenant on Economic, Social and Cultural Rights[7]. Thus, in July 2010, through Resolution A/RES/ 64/292[9] the General Assembly of the United Nations recognized access to water and sanitation as a human right. In the same year, a resolution passed by the Council of Human Rights ratified and clarified this understanding. Since then, countries should gradually ensure that right, including the obligation to recognize it within national legal systems. States are obliged to respect, protect and enforce this right but that does not necessarily imply that they should be the service provider; they should monitor and regulate providers and ensure that the right is not violated[7].

According to General Comment No. 15[7], access to water should comply with requirements such as availability, quality/safety, acceptability and physical and financial accessibility, as well as respecting the general principles of human rights. Therefore, water should be available in sufficient quantity for personal and domestic use; it should be safe and of suitable quality and represent no health risk. It should have acceptable color, smell and taste, avoiding the need for

individuals to seek unsafe alternative sources; and it should be accessible. The special needs of individuals should be taken into consideration and the route to collect water should not present the risk of attack from animals or people. Furthermore, water should be available at an affordable price for all the population. The price paid by individuals to have access to water should not prejudice the purchase of other essential goods such as food, housing and health care[7,10].

Thus, the aforementioned document recognized that everyone requires access to enough water for drinking, cooking, personal hygiene and cleaning their home, as well as access to sanitation services that do not compromise their health or dignity[7]. The lack of these resources affects health and the quality of life. Bain et al.[19] estimate that 1.8 billion people worldwide drink water contaminated with *Escherichia coli*, which is an indicator of fecal contamination. Furthermore, out of every five people, four do not wash their hands after contact with urine and/or feces, which can cause various diseases[20]. The simple act of washing hands with soap significantly reduces the prevalence of diseases such as diarrhea, which is responsible for the deaths of 760,000 children aged under the age of five worldwide every year[21]. Besides being essential for reducing child mortality, access to water and sanitation decreases the prevalence of malnutrition and tropical diseases such as malaria, dengue, Chikungunya and Zica[22]. In places where water is scarce, many families choose to use containers to store it. These containers are often poorly sanitized, which compromises the quality and safety of water, or they may condition the water improperly, which leads to the appearance of mosquito larvae. For example, the high incidence of arboviruses transmitted by *Aedes aegypti* in 2015-16, in Brazil can be associated with the crisis in water supply, which forced many families to store water.

Together with the prevalence of infectious and parasitic diseases, lack of access to water, particularly in rural areas, contributes to gender inequality. In many countries, the people responsible for collecting water and cleaning homes are women and children, who are vulnerable to violence and sexual abuse, which can occur during these activities. In some cases women spend more than one hour collecting water, and such trips can be performed several times a day, thereby reducing the time that could be otherwise used for income-generating activities, the health care of children and school activities[23,24]. Koowal and Walle[25] have observed that when the time spent collecting water is reduced home-based work can be rearranged to allow girls to attend school. In Ghana, it was observed that when there was a reduction of 15 minutes in the time taken to collect water, the number of girls aged 5 to 15 attending school increased from 8 to 12%. In Yemen and Pakistan, reducing the time taken to collect water by an hour resulted in an increase in the frequency of girls attending school of 10 and 12% respectively[20,25]. Moreover, when the distance to collect water is more than 30 minutes, it often occurs that a smaller volume than is required for personal and household needs is collected, which compromises health and results in the appearance of diseases, especially malnutrition and diarrhea[26]. A study conducted in 2012 by Pickering and Davis[26] indicated that reducing the time spent collecting water by 15 minutes can reduce the mortality of children under five by 11% and the prevalence of diarrhea or malnutrition by 41%. Moreover, the reduction of hygiene during menstruation can cause infection of the reproductive system, pelvic inflammation and infertility. Poor hygiene can also cause urinary infections that are directly associated with premature birth, fetal malformation, and pre-eclampsia[23]. Allied to this, the weight of water, which is often loaded onto the head, can cause musculoskeletal pain and premature abortion[23,24]. Reducing the distance to be travelled to collect water, as well as reducing the price of water, also has beneficial effects on the health of children and women because it increases the amount of water that can be consumed by families.

With regard to sanitation, studies have shown that women avoid using public facilities during the day in order to maintain privacy, coming out at night, which increases the risk of violence against them[23,27]. In addition, women reduce their water intake in order to reduce the frequency with which they use these toilet facilities. According to Campbell et al.[23], biological processes such as defecation, menstruation and passing urine, are private and in some countries they are considered as shameful. Thus, a lack of adequate sanitation facilities can result in fear, psychological stress and reduced self-esteem for women because they may be unable to maintain their self-respect and social reputation. A study by Nauges and Strand[27] showed that in schools with mixed-sex bathrooms girls also avoided drinking water and that many girls did not attend school to avoid using these facilities. In Bangladesh, after some schools provided separate bathrooms by sex they found an increase of 11% in the frequen-

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cy of girls attending school, indicating that proper access to sanitary facilities can assist in equal access to schooling[27].

Objective No.7 of the Millennium Development Goals (MDGs) is "Ensuring Sustainable Development" and one its goals (based on 1990 indices) was to halve the proportion of people without access to safe drinking water and sanitation by 2015[28]. The MDGs were adopted by the UN General Assembly in 2000 and were aimed at development. It is intended that governments, the international community, civil society and the private sector should unite around concrete objectives. The deadline for the MDGs has ended and with regard to access to water the target was met in 2010, five years before the deadline, although questions have been raised about the standard of access that was used for monitoring the goals[12]. Data from the WHO/UNICEF[12] has shown that from 1990 to 2015, 2.6 billion people worldwide have gained improved access to water, an increase in global coverage of 91%. However, with regard to sanitation progress has been slower and the target was not met, with approximately 1 billion people identified as still having to defecate outdoors.

Although it can be considered that the target related to access to water has been achieved, it is important to note that that the principles of human rights were not included in the MDGs[11]. Therefore, issues such as non-discrimination were not addressed. It should also be noted that much inequality is related to access to facilities because factors such as age, gender, ethnicity, disability and socioeconomic status put some people at a disadvantage[29]. According to Albuquerque[29], governments are not committed to ensuring access to the most vulnerable sectors of the population. In addition, the MDGs also did not evaluate the quality of available water, whether availability was continuous, the distance to get to the source of water, as well as other issues that have an impact on access to water and the amount of water that is collected[30]. Consequently, it is important to establish new goals to combat discrimination and inequality in this respect.

According to a report published by UNICEF in 2015[12], many disparities still exist with regard to access to water and sanitation. While people living in more developed regions have universal access to these resources, 48 countries that are considered to be low-development still have major shortcomings in this area, especially in sub-Saharan Africa and Southeast Asia. Furthermore, the same report indicated that 8 out of 10 individuals who still use inappropriate sources of water, and 9 out of 10 who are obliged to defecate outdoors, live in rural areas. This report demonstrates that, despite the fact that progress that has been made, the most vulnerable groups are those who are still disadvantaged with respect to access to water and sanitation.

In order to build upon the advances achieved by the MDGs, and to also incorporate human rights principles, in 2015 Sustainable Development Goals (SDGs) were declared in order to eradicate poverty in all its dimensions[31]. The 17 such goals are based on the Universal Declaration of Human Rights and international treaties on human rights; they are intended to combat iniquity and to promote human rights for all without discrimination. These goals are integrated and indivisible, balancing the economic, social and environmental dimensions of sustainable development. In recognizing that human dignity is fundamental, and that to eradicate poverty it is necessary to value the needs of vulnerable groups, these goals underline the need to empower such groups. Moreover, they reaffirm the "responsibility of all states to respect, protect and promote human rights and fundamental freedoms for all, without distinction." No one should be left behind[31].

Regarding the issue of the HRWS, goal No. 6 states that the intention is to *ensure the availability and sustainable management of water and sanitation for all by 2030*, which includes six targets. Target 6.1 is aimed at eliminating inequality in access to clean water for all, without discrimination, so that everyone has access to water that is safe and of suitable quality. Target 6.2 is designed to ensure adequate access to sanitation, aiming to end defecation in the open air and to give special attention to the needs of women and those in vulnerable situations[31]. These new objectives, which build on a human rights framework and are targeted at sustainability, provide a response to the issues of inequity that were identified in the MDGs.

Thus, interventions to improve access to water and sanitation, which are based on human rights, without discrimination, and which include social participation, transparency and accountability, can make a difference in the life and health of vulnerable groups, especially women and children. They can result in improved welfare, reduce child mortality, reduce gender inequality, improve access to education, improve the quality of life and reduce poverty.

Final considerations

As this article has indicated, the adoption of a human rights framework (in this case the HRWS) can be a key instrument to promoting the health of vulnerable groups because it can provide structural changes in the social determinants of the health-illness-care process as it is based on the principles of human rights, guaranteeing justice, dignity and equity. The HRWS recognizes that access to these services is a right of individuals and an obligation for the state; it cannot be considered as an act of charity. Consequently, when access to water is considered as a human right, communities, especially vulnerable groups, which in principle are those that most suffer from violations of their rights, can claim this right by using the legal system and the courts if required. Given that social participation is an important principle of the human rights framework, vulnerable groups now have the right to participate in decision-making processes and the right to have their demands and needs heard and valued.

Collaborations

P Neves-Silva worked on the idea, the design, the research and the writing of the article. L Heller worked on the final draft of the article, its critical review, and the approval of the version to be published.

References

1. Malta DC, Silva MMA, Albuquerque GM, Lima CM, Cavalcante T, Jaime PC, Silva Júnior JB. A implementação das prioridades da Política Nacional de Promoção da Saúde, um balanço, 2006 a 2014. *Cien Saude Colet* 2014; 19(11):4301-4312.
2. Buss P. Uma introdução ao conceito de promoção da saúde. In: Czerina D, organizadora. *Promoção da Saúde:conceitos, reflexões, tendências*. Rio de Janeiro: Editora da Fiocruz; 2009. p. 19-42.
3. Ayres JR, Paiva V, França-Júnior I. Conceitos e práticas de prevenção: da historia natural da doença ao quadro de vulnerabilidade e direitos humanos. In: Paiva V, Ayres JR, Buchalla CM, organizadores. *Vulnerabilidade e direitos humanos – prevenção e promoção da saúde: da doença à cidadania*. Curitiba: Juruá; 2012. p. 77-94.
4. Czeresnia D. O conceito de saúde e a diferença entre promoção e prevenção. In: Czeresnia D, organizadora. *Promoção da Saúde:conceitos, reflexões, tendências*. Rio de Janeiro: Fiocruz; 2009. p. 43-58.
5. Mann J. Health and human rights: Protecting human rights is essential for promoting health. *BMJ* 1996; (312):924-925.
6. Gruskin S, Tarantola D. Uma panorama sobre saúde e direitos humanos. In: Paiva V, Ayres JR, Buchalla CM, organizadores. *Vulnerabilidade e direitos humanos – prevenção e promoção da saúde: da doença à cidadania*. Curitiba: Juruá; 2012. p. 23-33.
7. Office of the High Commissioner for Human Rights (OHCHR). *General Comment No. 15: The Right to Water (Arts. 11 and 12 of the Covenant)*. Geneva: OHCHR; 2010.
8. Office of the High Commissioner for Human Rights (OHCHR). *The Right to Water*. *Factsheet No. 35*. Geneva: OHCHR; 2010.
9. United Nations General Assembly (UNGA). *Human Right to Water and Sanitation*. Geneva: UNGA; 2010. UN Document A/RES/64/292.
10. Winkler I, Roaf V. The human rights framework for water services. In: Bartram J, Baum R, Coclanis P, Gute DM, Kay D, McFadyen S, Pond K, Robertson W, Rouse MJ, editors. *Routledge Handbook of water and health*. London: Reutledge; 2015. p. 514-552.
11. Brown C, Neves-Silva P, Heller L. The human right to water and sanitation: a new perspective for public policies. *Cien Saude Colet* 2016; 21(3):661-670.
12. World Health Organization (WHO), UNICEF. *Joint monitoring program for water supply and sanitation. Progress on drinking water and sanitation. Update 2015*. Geneve: WHO, UNICEF; 2015.
13. United Nations Development Group (UNDG). *The Human Rights Based Approach to Development Cooperation Towards a Common Understanding Among UN Agencies*. Geneva: UNDG; 1997.
14. The Global Initiative for Economic, Social and Cultural Rights. *Human Rights-Based Approach to Water in Informal Settlements: A Guide for Practitioners*. Geneva: UN; 2015.
15. Ayres JRCM, França Junior I, Calazans GJ, Saletti Filho HC. O conceito de vulnerabilidade e as praticas de saúde: novas perspectivas e desafios. In: Czerina D, organizadora. *Promoção da Saúde: conceitos, reflexões, tendências*. Rio de Janeiro: Fiocruz; 2009. p. 121-143.
16. Delor F, Hubert M. Revisiting the concept of vulnerability. *Soc Sci Med* 2000; (50):1557-1570.
17. Adger WN. Vulnerability. *Global Environmental Change* 2006; (16):268-281.
18. Buchalla C, Paiva V. Comentário: da compreensão da vulnerabilidade social ao enfoque multidisciplinar. *Rev Saude Publica* 2002; 36(Supl. 4):117-119.
19. Bain R, Cronk R, Hossain R, Bonjour S, Onda K, Wright J, Yang H, Slaymaker T, Hunter P, Prüss-ustün A,Bartram J. Global assessment of exposure to faecal contamination through drinking water based on a systematic review. *Trop Med Int Health* 2014; 19(8):917-927.
20. United Nations World Water Assessment Programme (WWAP). *World Water Development Report 2015: Water for a Sustainable World*. Paris: UNESCO; 2015.
21. World Health Organization (WHO). *Diarrhoeal Disease. Fact Sheet Nº 333*. Geneve: WHO; 2013.
22. Heller L. The crisis in water supply: how different it can look through the lens of the human right to water? *Cad Saude Publica* 2015; 31(3):447-449.
23. Campbell OMR, Benova L, Gon G, Afsana K, Cumming O. Getting the basic rights – the role of water, sanitation and hygiene in maternal and reproductive health: a conceptual framework. *Trop Med Int Health* 2015; 20(3):252-267.
24. Sorenson SB, Morssink C, Campos PA. Safe access to safe water in low income countries: Water fetching in current times. *Soc Sci Med* 2011; (72):1522-1526.
25. Koolwal G, Walle D. Access to Water, Women's Work, and Child Outcomes. *Economic Development and Cultural Change* 2013; 61(2):369-405.
26. Pickering A, Davis J. Freshwater availability and water fetching distance affect child health in sub-Saharan Africa. *Environ Sci Technol* 2012; (46):2391-2397.
27. Nauges C, Strand J. *Water hauling and girls' school attendance: Some new evidence from Ghana*. Washington: The World Bank; 2011. Policy research working paper No. 6443.
28. United Nations (UN). *Resolution adopted by the General Assembly: United Nations Millennium Declaration*. Geneva: United Nations; 2000.
29. Albuquerque C. *Integrating non-discrimination and equality into the post-2015 development agenda for water, sanitation and hygiene*. Geneva: UN; 2012.
30. World Health Organization (WHO), United Nations Children's Emergency Founds (UNICF). *Joint monitoring program for water supply and sanitation. Progress on drinking water and sanitation. Update 2012*. Geneva: WHO; 2012.
31. United Nations (UN). *Resolution adopted by the General Assembly on 25 September 2015. Transforming our world: the 2030 Agenda for Sustainable Development.* Geneva: UN; 2015.

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