Literature Review

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PRIMARY HEALTH CARE ACTIONS IN NATURAL DISASTERS

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ABSTRACT

Objective: to identify in the national and international literature Primary Health Care actions in natural disasters.
Method: an integrative literature review, which included 24 original surveys between 2006 and 2018 on natural disasters.
Results: a qualitative analysis of the studies included primary care actions in the prevention and mitigation, preparation, response, and disaster recovery phases.
Conclusion: Primary Health Care actions involve multidisciplinary teams, the community and families in the territory in which the teams operate, articulation in a network of intersectoral services, in managerial and educational dimensions to implement effective plans for disaster situations.

DESCRIPTORS: Disasters. Natural disasters. Risk management. Health management. Primary health care.

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AÇÕES DA ATENÇÃO PRIMÁRIA À SAÚDE EM DESASTRES NATURAIS

RESUMO

Objetivo: identificar na literatura nacional e internacional as ações de atenção primária à saúde em desastres naturais.
Método: revisão integrativa de literatura, em que foram incluídas 24 pesquisas originais entre 2006 e 2018 sobre desastres de origem natural.
Resultados: a análise qualitativa dos estudos contemplou ações de atenção primária nas fases de prevenção e mitigação, preparação, resposta, recuperação em desastres.
Conclusão: ações de atenção primária à saúde envolvem equipes multiprofissionais, comunidade e famílias do território de atuação das equipes, articulação em rede de serviços, intersetoriais, em dimensões gerenciais e de educação para operacionalização de planos efetivos às situações de desastres.

DESCRITORES: Desastres. Desastres naturais. Gestão de risco. Gestão em saúde. Atenção primária de saúde.

ACCIONES DE LA ATENCIÓN PRIMARIA DE SALUD EN DESASTRES NATURALES

RESUMEN

Objetivo: identificar en la literatura nacional e internacional las acciones de la atención primaria de salud en desastres naturales.
Método: revisión integradora de la literatura, que incluyó 24 investigaciones originales entre 2006 y 2018 sobre desastres de origen natural.
Resultados: el análisis cualitativo de los estudios contempló acciones de atención primaria en las fases de prevención y mitigación, preparación, respuesta, recuperación ante desastres.
Conclusión: las acciones de atención primaria de salud involucran a los equipos multiprofesionales, la comunidad y las familias en el territorio donde operan los equipos, articulación en una red de servicios, intersectorial, en dimensiones gerenciales y educativas para la implementación de planes efectivos para situaciones de desastre.

DESCRIPTORES: Desastres. Desastres naturales. Gestión de riesgo. Gestión en salud. Atención primaria de salud.

INTRODUCTION

Disasters are characterized by injuries that interfere in the activities of a community or society, which can cause economic, environmental and/or material damage. These negative impacts demand a coping that transcends the affected people's own resources, given the situation of vulnerability, threat and inability to synthesize the consequences of the event.[1]

Natural disasters are still poorly studied regarding the participation of the health sector. In Brazil, this field of interest is incipient in terms of the knowledge produced. Over 20 years, approximately 96 million people have been affected by natural disasters in Brazil[2]; and, worldwide, around 1.35 million individuals.[3] Moreover, it is important to consider the likelihood of this same population having suffered more than one occasion due to the same type of tragedy over the years. This enhances the effects related to housing and infrastructure issues, indirectly affecting people's health condition.[4] This record points to the need for urgent preparation and strategic planning to deal with unexpected disasters, including the articulation of health services and intersectoral involvement, including public health.[5]

Actions for Disaster Risk Reduction at the global level are established by the Hyogo Framework 2005-2015 and the Sendai Framework 2015-2030, from which several countries have reported efforts to reduce mortality and losses in disasters. Disaster risk reduction is an investment for the prevention of future losses in disasters that are increasingly present in the world, and also contributes to sustainable development. The importance of integrating the health system is highlighted, involving primary, secondary and tertiary care, based on professional training on disaster risk and implementation of approaches focused on performance. The need to mobilize communities to engage jointly in these actions at all stages of a disaster cycle stands out.[6]

Disasters pose a challenge for health systems when the effects are prolonged due to scarce recovery measures, including the performance of primary care.[7] Thus, among the Essential Functions of Public Health (EFPH), systematized by the Pan American Health Organization (PAHO), policy development, planning, prevention, mitigation, preparedness, response and rehabilitation actions to reduce the impact of disasters on the population's health stand out.[8]

Studies are needed in the context of disaster risk and health practices in primary care, considering the dynamics of effective planning actions to minimize damage to the population's health.[9] Exploring the role of teams can contribute to facing the difficulties encountered in professional practices in events such as disasters, identifying and replicating actions that were beneficial and creating a culture of preparation.[10] Therefore, the present review study aimed to identify in the national and international literature Primary Health Care (PHC) actions in natural disasters.

METHOD

This is an integrative literature review study of scientific studies published from 2006 to 2018. The stages of this review followed a previously established protocol consisting of: 1. research question, namely: What actions (prevention, preparedness, response, recovery) characterize the PHC performance in natural disasters?; 2. Definition of study inclusion criteria and definition of search strategy with descriptors for selection of the literature sample; 3. Representation of selected studies in table format, identifying data and characteristics in common; 4. Critical analysis of the included studies, considering similarities and distinctions of the studies' contributions to answer the question and contemplate a disaster cycle stages; 5. Interpretation/discussion of results.

A bibliographic search of publications indexed at National Library of Medicine (PubMed/MEDLINE), Web of Science, Scopus, CINAHL (EBSCO), Latin American and Caribbean Health Sciences Literature (LILACS), PAHO, VHL and Disasters databases have been performed. Descriptors have been selected using Health Sciences Descriptors (DeCS) and Medical Subject Headings (MeSH).

There are several specific descriptors in the area of disasters, many of which are not applied to studies in health, bringing to the sample studies that are not of interest in this review or that restrict search results when associated with what was planned. In this regard, the search strategy with broader results used the following descriptors in Brazilian Portuguese: "*alagamento*"; "*desastre*"; "*enchente*"; "*furacão*"; "*incêndio*"; "*inundações*"; "*terremoto*"; "*atenção básica*"; "*atenção primária*"; "*atenção primária à saúde*"; "*atendimento básico*"; "*atendimento primário*"; "*cuidado básico*"; "*cuidados básicos*"; "*cuidado de saúde básico*"; "*cuidados de saúde básicos*"; "*cuidado de saúde primário*"; "*cuidados de saúde primários*"; "*cuidado primário*"; "*cuidados primários*"; "*cuidados primários à saúde*"; "*cuidados primários de saúde*". Such descriptors have been combined with each other using the Boolean terms "AND" and "OR", without using filters.

National and international publications of original research and of qualitative or quantitative methods, published in Brazilian Portuguese, English, and Spanish, which focused on natural disasters, have been included. Duplication of articles, reviews, editorials, congress proceedings, case studies and reflection articles have been excluded. The steps for selecting the literature sample were organized using the Endnote Web manager and a team of reviewers. Study selection was conducted according to the Preferred Reporting Items for Systematic Reviews and Meta-Analyzes (PRISMA). The researchers split into two pairs. A pair was responsible for searching the databases, using the selected keywords and descriptors and reading abstracts for the first selection according to the criteria. In this stage,2,093 articles have been found. After searching and selecting the studies, from reading abstracts, they shared with the other pair who participated in the stage of selecting the studies to read in full and other stages of the review simultaneously. This review was a scientific initiation study (SI) with a CNPq grant that was valid in 2017. After the end of the SI project period, this review went through an update of searches in databases, considering the period of 2017 and 2018, whose synthesis of the stages is presented in Figure 1. In the search update stage for 2017 and 2018, a total of 1,073 articles were found, as complemented in the flow of Figure 1.

Scientific reading of the texts in full was adopted to perform the data analysis. An instrument was developed to collect and analyze data from the included studies, in which the following information was recorded: title, journal, year of publication, origin of authors (country/university), research objective (s), details methodological, sampling details, study location, type of disaster, main results on PHC actions and other relevant contributions to health and/or nursing. Subsequently, the data were analyzed following the steps of data reduction, visualization and comparison, outline of the conclusion, and verification.[11]

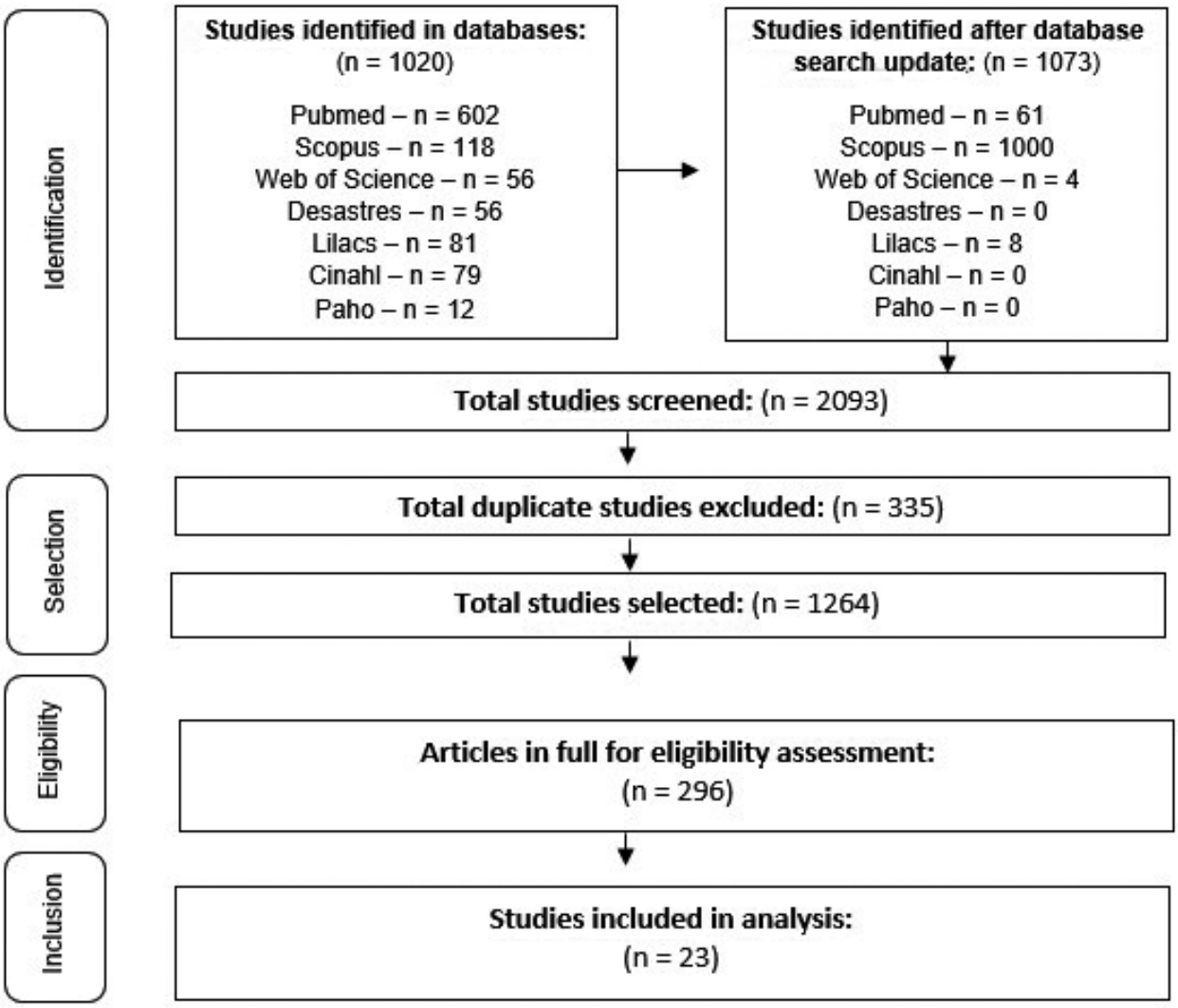

Figure 1 – Flowchart of the study selection process using PRISMA methodology. Florianópolis, SC, Brazil, 2018.

RESULTS

Description of the characteristics of studies

Chart 1 shows the 23 studies selected for authorship, journals and year of publication.

As for year of publication, 21.72% were published between 2006 and 2009; 26.07%, between 2011 and 2014; 30.42, from 2015 to 2018. The articles were from different countries such as the United States of America (USA) (26.08%), Australia (13.04%), Chile (8.64%), Canada (4.34%), Iran (4.34%), United Kingdom (4.34%), Japan (4.34%), Pakistan (4.34%), Brazil (4.34%), Indonesia (4.34%), India (4.34%), Vietnam (4.34%), Bangladesh (4.34%), Sri Lanka (4.34%), Nepal (4.34%). Floods and earthquakes (20.83%), hurricane, cyclone, earthquake and tsunami (4.16) have been identified. In 41.66% of the studies there is no specification of the type of event, corresponding to the publications dealing with PHC interventions and their assessments in disaster contexts. The methods used in the research analyzed were qualitative (47.82%) and quantitative (52.17%).

Chart 1 – Studies selected after search. Florianópolis, SC, Brazil, 2018.

Authors	Title	Journal	Year
Looman WS.[32]	A developmental approach to understanding drawings and narratives from children displaced by hurricane Katrina.	J Ped Health Care	2006
Blashki G, McMichael T, Karoly DJ[30]	Climate change and primary health care.	Aust Family Physician	2007
Lalonde C.[21]	Primary healthcare organizations facing a disaster: the Quebec experience.	Disaster Prev Manag An Int J	2007
Ablah E, Tinius AM, Horn L, et al.[22]	Community health centers and emergency preparedness: an assessment of competencies and training needs.	J Commy Health	2008
Olympia RP, Rivera R, Heverley S, et al.[18]	Natural disasters and mass-casualty events affecting children and families: a description of emergency preparedness and the role of the primary care physician.	Clin Ped (Phila).	2008
Walker R.[14]	Climate change and primary health care intervention framework.	Aust J Prim Health	2009
Fuady A, Pakasi TA, Mansyur M.[24]	Primary health centre disaster preparedness after the earthquake in Padang Pariaman, West Sumatra, Indonesia.	BMC Res Notes	2011
Gulzar SA, Faheem ZA, Somani RK.[35]	Role of community health nurse in earthquake affected areas.	J Pak Med Assoc	2012
Bassilios B, Reifels L, Pirkis J.[31]	Enhanced primary mental health services in response to disaster.	Psychiatr Serv	2012
Phalkey R, Dah SR, Mukhopadhyay A, et al.[25]	Prepared to react? Assessing the functional capacity of the primary health care system in rural Orissa, India to respond to the devastating flood of September 2008.	Glob Health Action	2012
Ardalan A, Mowafi H, Malekafzali AH, et al.[16]	Effectiveness of a primary health care program on urban and rural community disaster preparedness, islamic republic of Iran: a community intervention trial.	Disaster Med Public Health Prep	2013
Ishiura Y, Fujimura M, Yamamoto H, et al.[27]	Asthma exacerbations after the East Japan Disaster.	J Med Invest	2013
Adams RE, Laraque D, Chemtob CM, et al.[29]	Does a one-day educational training session influence primary care pediatricians' mental health practice procedures in response to a community disaster? Results from there a ching children initiative (RCI).	Int J Emerg Ment Health.	2013
Van Minh H, Anh TT, Rocklov J, et al.[28]	Primary healthcare system capacities for responding to storm and flood-related health problems: a case study from a rural district in central Vietnam.	Glob Health Action	2014
Vitriol V, Minoletti A, Alvarado R, et al.[12]	*Respuesta de los centros de atención primaria ensalud mental después del terremoto y tsunami del 2010 em la Región del Maule.*	Rev Med Chile	2014
Uddin J, Mazur RE.[17]	Socioeconomic factors differentiating health-care utilization of cyclone survivors in rural Bangladesh: a case study of cyclone Sidr.	Health Policy Plan	2015
Claver ML, Wyte-Lake T, Dobalian A.[20]	Disaster preparedness in home-based Primary Care: Policy and Training.	Prehosp Disaster Med	2015

Chart 1 – Stud

Authors	Title	Journal	Year
Wyte-Lake T, Claver ML, Dobalian A.[13]	Assessing patients' disaster preparedness in home-based primary care.	Gerontology	2016
Milojevic A, Armstrong B, Wilkinson P.[36]	Mental health impacts of flooding: a controlled interrupted time series analysis of prescribing data in England.	J Epidemiol Community Health	2017
Farley JM, Suraweera I, Perera WLSP, et al.[19]	Evaluation of flood preparedness in government healthcare facilities in eastern province, Sri Lanka.	Glob Health Action	2017
Raven J, Baral S, Wurie H, et al.[33]	What adaptation to research is needed following crises: a comparative, qualitative study of the health workforce in Sierra Leone and Nepal.	Health Res Policy Syst	2018
Menegat RP, Witt RR.[34]	Primary health care nurses' competencies in rural disasters caused by floods.	Rural Remote Health	2018
Minoletti A, Alvarado R, Vitriol V, et al.[15]	*Efecto de acciones de equipos de atención primaria de salud para proteger la salud mental después de desastres naturales.*	Cad Saúde Coletiva	2018

Primary Health Care Actions in a disaster cycle stages

Analysis of the studies revealed actions in the following phases of disaster risk management, which are presented as categories of the results of this review: prevention and mitigation; preparation; response; recovery.

Actions for prevention and mitigation are measures to reduce disaster occurrence and intensity, through identification, mapping and monitoring of risk factors, threats, local vulnerabilities and training of society to face them.[12] Prevention expresses the intention to avoid and eliminate the adverse impacts of disasters, through interventions planned in advance, such as carrying out area containment works in landslide risks, regulation of land use and occupation, among others.[12] Mitigation consists of interventions that aim to limit the impacts of disasters, minimizing risks even though they cannot be eliminated. It includes educational campaigns, training of professionals, sectors and the community for recognition of risks and prevention, simulation of evacuation, among others.[12]

Emergency planning is also a preventive action and should become part of the daily routine of public health professionals, which implies collaborative work, based on relationships that already exist in the community.[13]

The literature pointed out as an innovation in mitigation the understanding of structural and individual changes that determine the interventions necessary to minimize climate change in a given location and avoid some of the most destructive impacts. Integrated health promotion actions must consider the resilience of the community to improve structural aspects, through educational strategies and dynamic awareness, relationships and responses to challenges in the communities.[13–14] For mitigation, considering Social Determinants of Health and intersectoral action can maximize the preventive potential of PHC in situations of disasters[15] and knowing socioeconomic aspects of families in the community influences the choice of assistance strategies at this stage of catastrophes.

Awareness-raising and mobilization measures by families of communities for disaster situations significantly increase the potential for community intervention and risk perception.[16] The principle of communication on health risk suggests that health managers integrate health education actions with

the educational conditions of people living in areas prone to natural disasters. Management of this care reduces the possibility of inappropriate results of professional actions to the community culture and develop protective behaviors among the population.[17]

An interesting finding of this review concerns prevention actions aimed at mental health in contexts of disasters. In this regard, greater efforts must be made to people undergoing treatment of mental illnesses, prior to disasters, and to those who present emotional crises after these events. The psychological vulnerability to traumas and stresses considering permanence in shelters and distancing of their support networks for a long period, after these events, imply an intersectoral action that includes PHC.[15]

PHC actions for disaster preparedness are identified for the multidisciplinary dimension of PHC as the responsibility of health teams in preparing vulnerable families to deal with potential disasters14,18; promotion of continuing education for PHC professionals with the purpose of reducing deficiencies in the readiness of events[18–19]; territory recognition, based on sociodemographic data to identify and prioritize needs and provide guidance to families in the community.[13,14,18]

Specific recommendations about the risks to which the community is exposed must be raised in the territory and based on the population profile. Vulnerability diagnosis can help managers and professionals to improve organizational interventions during a catastrophe. Moreover, it is important to know the dynamics of local actors, especially those who have civic and social representative responsibilities, in order to establish a relationship with disaster management.[15,20]

The literature emphasizes the priority of community and family preparedness actions to disasters.[16,19] Contact by different means of communication between PHC teams with families and rapid mobilization for protective measures are fundamental actions in the first 24 hours of the alert to the event.[21] Authors emphasize that proactive dissemination strategies prior to the event can be useful in identifying health needs and facilitate access to services by the population in a disaster.[22–23]

In the USA, it is recommended that families know the specific risks that threaten their community (tornadoes, floods, landslides, earthquakes, etc.); know and disseminate community response plans; recognize warning systems and establish your own family plan that includes training your members. Among the guidelines provided by PHC professionals are recognition of the risk map of the community, their home and preparation of a contingency plan.[18] Thus, families are encouraged to carry out planning tasks with the contribution of all family members and to place it in a visible place at home.[16,24] Other recommendations worked by PHC professionals with families include discussing best escape routes, searching for “safe” places for each type of disaster, communicating between family members during events and defining contact references outside the city when in situation of separation from the family during disasters. Adult family members must be certified in one of the American Red Cross cardiopulmonary resuscitation (CPR) classes.[18] Furthermore, each family is instructed to assemble a kit of essential supplies (water and non-perishable food, clothing and blankets appropriate for the climate, hygiene items, tools and kitchen accessories); a first aid kit (germicidal handkerchiefs, bandages, latex gloves, adhesive tape, saline, compresses, scissors, tweezers); a personal emergency information card containing data, such as blood group, major illnesses and medical considerations; equipping houses with fire extinguishers, smoke alarms, portable radio with batteries, and flashlights.[16,18]

Organizing preparedness plans for communities and families, training plans, local consultation plans and a multidisciplinary action plan reflect in better disaster response performance. However, having written disaster plans does not in itself amount to adequate preparation. Networking with other teams and services and regular multidisciplinary team training are required every six months.[25]

The studies[21,25–27] point to the need to invest in continuous training of multidisciplinary PHC teams; qualify for action in emergency situations[19]; encourage good interpersonal relationships, synchronism in health care actions with functions by level of domain; define responsibilities and positions that contribute so that technical skills and expertise are properly applied, reflected in the conjecture of plans. A study of health services that were hit by floods in Sri Lanka reported a lack of professional education promoted by the government to act in disaster situations. Health professionals participating in the study reported seeking knowledge and preparation on the internet or in private courses, which for teams in rural areas is at a greater disadvantage due to geographical isolation and difficulty in accessing information.[19]

In addition to investing in vocational training as an action to prepare for disasters, studies show that attention to workers' mental health minimizes losses and consequences to income at work at various times and after disasters.[12]

Policies and guidelines are recommended to develop PHC more fully as a disaster preparedness resource, with the capacity to respond effectively and operationally to plans for events characteristic of the territory[28], expanding over time the preparation for other types of disasters other than those of natural origin.[29] When there were no policies for disaster preparedness in PHC, professionals mentioned that learning from veteran teams that participate in preparations for these events motivates teams to implement actions that jointly involve the community in evacuation exercises of areas and people at greatest risk or vulnerability.[20] Training actions aimed at PHC using distance learning tools have a wider range of professionals, economy, creativity, better use of time, resulting in a positive response from teams to interactive and online training.[23,24]

PHC actions in response to emergencies and disasters involves assisting survivors who have had some type of disease, whose demand may exceed the capacity of the formal health system.[17] The ability of primary care services to respond to the demands of preventive care (immunizations, disease prevention) and treatments for health problems arising from storms and floods (such as surgical procedures, emergency care), especially in rural areas, strengthens if there are plans to prepare facilities with procedures and identification of job descriptions; availability of contingency funds; accessible emergency treatment protocols; computerized system for processing information and data relevant to health service provision.[28]

The improvement of surveillance and risk indicators is also characterized as a response in a disaster scenario. The importance of guidance on food safety, vaccination programs, treatment for injuries, attention to post-traumatic stress disorders, depressive disorders or anxiety disorders stands out.[30] Increased occurrences and complications related to vectors increases the incidence of deaths from infectious and chronic diseases.[30,31]

Teams that traveled to western Louisiana, USA, to provide primary care and public health services to people housed in shelters after Hurricane Katrina, struggled when responding to approaches in different age groups. Although those affected by the hurricane were physically unharmed, children expressed a struggle to understand life after disaster; this denotes special attention of PHC teams in welcoming stories and in responding to emotional demands in order to minimize impacts that interfere with their mental health.[32] Care in response to psychosocial impacts implies a different approach at this stage of a disaster. Drawing seems to help in the interpretation of what children communicate and express about their traumatic experiences in association with their thoughts and perceptions of reality.[29]

In a study conducted in the midst of a major earthquake in Nepal in 2015, health professionals reported several coping strategies that helped them deal with the event response work: ethical virtue, professional duty and a sense of responsibility to the community in providing immediate care to the injured; community and management support in transporting patients, drugs and supplies to health facilities; aligning the roles and leadership of central and district administrations in monitoring and

responding to the needs of health professionals, such as psychosocial support; support for families where health workers or volunteers died or were injured as well as public appreciation and recognition for the efforts of the health team.[33]

In Brazil, a study addressed the professional skills of nurses working in PHC, which translate actions in response to disasters. Such competences are related to the leadership and management skills such as: articulation and integration of health and intersectoral services and organizations; continuous planning update during disaster response and recovery; provision of supplies and human resources; teamwork in managing the work process of workers and volunteers; health care for direct and indirect care for victims; guidance for the community through mapping and assessment of risk areas and for building partnership networks with the region's population and institutions; communication, as it requires using tools for interpersonal relationships and information dissemination; psychological support, in identifying and supporting the psychological needs of everyone involved; health surveillance, to determine the main risks of diseases, collaborate in the development of plans to reduce and identify risks; education, to implement training programs for nurses and other health professionals.[34]

PHC actions to recover from natural disasters were less found in the analyzed literature. Disasters can have lasting impacts on the population's health and undermine the conditions of assistance provided by public health services. Thus, in order to maintain post-disaster PHC assistance, it is necessary for health managers to guarantee financing for provision of services that ensure quality, free and/or low-cost treatment to affected people, attention to affected families with symptoms persistent psychological damage or other damage from a disaster.[31]

In another study after an earthquake in Pakistan, it was found that the experience of working with PHC teams and nursing professionals focused on providing care to the community, ensuring the recovery of affected areas and promotion of community health affected by the earthquake. Among the team's immediate actions are safety measures for professionals and families, immunization and infection control, information records, home visits, reorganization of basic and priority care such as prenatal and perinatal care.[35]

Health actions are necessary as a result of the impact on post-disaster mental health. In a study carried out in England, results demonstrated that there was an increase in the prescription of antidepressant drugs in PHC services in regions close to flood occurrence, with a high prevalence of mental disorders and overloads, suggesting important implications for public health practices.[36]

DISCUSSION

The analyzed studies cover PHC actions in the different phases of a disaster cycle, highlighting the potential of this area to act in reducing and managing risks and disasters. PHC performance in prevention and mitigation is focused on developing plans based on territory recognition, risk map construction, population vulnerability diagnoses, and professional and community team training.[25] With insufficient training and team planning, the impact on long-term actions after a catastrophe increases.[12] The studied literature shows that previous experiences with disasters correlated significantly with changes related to awareness, which positively influences community resilience. In comparisons between urban and rural families on the areas of educational intervention of PHC teams, both families showed improvement in awareness. However, rural families were more likely to develop readiness or alert activities and to cite training for response. Considering the results of studies on preparedness, family interventions may include topics that are relatively new to PHC contexts, such as climate change.[16]

Education is a key strategy for acting in disasters and is directly related to resilience in dealing with these events. It becomes a future investment in professional training to include the theme of risk and disaster management in the curricula, training prepared and resilient professionals to be support in learning and developing skills to prepare communities.[37]

There has been enormous pressure on existing health and support services systems in disasters that have devastated communities significantly.[38] This must be foreseen by the teams and considered in training and contingency plans, including covering the structural components of health services, mental health care, as they minimize the consequences at the time of response for the professionals and families affected.[12,15] Studies in different countries show significant results related to mental health disorder prevalence in survivors after natural disasters.[39,40] This is an important indicator for PHC actions aimed at health promotion, prevention, recovery in affected communities or at risk of disasters.[41]

Response actions in PHC are transversal to the existence of disaster preparedness actions, reflecting health conditions and demands for immediate and medium to long-term care in the recovery phase. There are recommendations for policies and guidelines to develop PHC more fully as a disaster preparedness resource, capable of responding effectively and operationally to plans for events characteristic of the territory, and over time, also expand preparations for other types of disasters that not of natural origin.[30,42] Response to a crisis is usually geared to survivors of a disaster; however, in the long run, distress and stress experienced by those not directly affected also need attention. Disclosing the services offered by PHC teams, ensuring access and paying attention to the complexities of disaster impacts are proactive actions to address such a crisis.[43]

The disaster recovery phase, in turn, should be seen as an opportunity to expand and improve services and facilities, taking the analysis of impacts as indicators for planning behavioral and infrastructure changes.[17] Maintaining access to post-disaster PHC services, while streamlining the demand and supply of care due to evacuation of areas and displacement of families from the area at risk or affected, becomes fundamental measure for community health management and response to the consequent demands.[44]

In Brazil, municipal and general contingency plans define shelter spaces. Families are provisionally relocated, for instance, in schools, sports gyms and exhibition centers, which commonly provide space with the capacity to accommodate many people.[45] Knowledge of these mappings and plans is essential for PHC, as homeless families suffer from the loss of their private territory, often for a long period after a disaster.[46] Statistics on mental health problems in people displaced after disasters are significant, regardless of socioeconomic status.[47] Psychological support should extend to the subsequent phases, considering the importance of understanding the social suffering implicit in this process of deterritorialization of victims. Such process is for families an element of reconstruction of their reality with profound implications for their health and the perspective of community life.

Experiences that guided the work of health teams based on PHC strategy, conceived as a community-based care and surveillance model, provided the opportunity for specific organization in each area of shelter and temporary settlement after the catastrophe, in this case, post-earthquake in Colombia. Inadequate conditions of settlements were observed, conducive to the transmission of diseases. Actions are needed for the social participation of community groups to carry out interventions appropriate to the reality of that population and useful at the time of a disaster.[48]

CONCLUSION

The result of this review study highlights the importance of disaster planning and education to prevent, prepare, respond, mitigate and recover from impacts, since PHC involves actions at all these stages to reduce disaster risks. Multidisciplinary and intersectoral work are evidenced as well as articulation of managers at different levels of work collaborates to work in a network, in order to meet the consequent demands.

Although countries have a regulatory framework and an adequate disaster management scheme, the decision-making capacity of the responsible body implies articulated work with all sectors involved, such as housing, the environment, education, the health system and the municipality. Efforts to mitigate damage and control risk are combined for authorities and work teams, executing PHC actions on time at all stages of a disaster cycle, focusing on prevention as part of planning that needs to be sustainable.

Special mention is made of the participation of qualified nurses in emergencies and disasters, forming work teams, demonstrating their knowledge and experience in caring for the person, family and community, leading work teams, promoting volunteering, promoting community actions and demonstrating altruistic behavior and solidarity. The psychosocial impact of disasters was an indicator to encourage actions that address mental health promotion and adequate assistance to survivors and workers in these contexts.

Restriction of research studies on natural-type disasters is considered a limitation that makes it impossible to generalize about PHC actions in disasters of other types. However, it is believed that the findings of this review corroborate the goals outlined for risk and disaster reduction by the Sendai Framework 2015-2030, offering contributions that already exist in research developed worldwide.

The present literature review contributes to bring the theme of natural disasters closer to the PHC context, with a view to planning actions for multidisciplinary teams that integrate risk and disaster management, especially at the community level. It is recommended that the identified actions can be taken to the agendas of discussion, in forums of the health sector, in professional training centers and others, considering the need to articulate PHC in territories vulnerable to disasters. It is also essential to deepen knowledge, already produced in this theme, and other studies that contribute to improving the health of populations, from prevention to recovery of the set of circumstances that involve disasters.

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NOTES

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There is no conflict of interest.

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