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# THE CONTRIBUTION OF SOLIDARITY TO INCREASING COMMUNITY RESILIENCE IN DISASTER SITUATIONS

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**Abstract**: This article concerns the identification and analysis of solidarity actions carried out by the population and the relationship with the improvement of community resilience to risks and disasters. This is a case study carried out in the neighborhood of Mãe Luiza, Natal, RN, Brazil. It was concluded that solidarity actions were of fundamental importance in ensuring that the disaster did not cause casualties, minimizing the material damage and suffering of the affected population, contributing to the improvement of community and global resilience in dealing with disaster risks.

Keywords: Disaster; Risk; Solidarity; Community Resilience; Community Ergonomics.

#### 1. INTRODUCTION

In recent times, a large number of areas related to environmental risk have been growing in different countries and regions of the world (SOUZA; LOUREIRO, 2014, p. 2). According to the United Nations Development Program – UNDP (2004, p. 10), on average 75% of the world's population lives in areas that, at least once between 1980 and 2000, were affected by disasters, such as earthquakes, tropical cyclones, floods or droughts, with human, material, environmental or economic consequences.

According to the Brazilian Atlas of Natural Disasters (CEPED/UFSC, 2012), Rio Grande do Norte has suffered a lot from drought, but has also presented many places with a high risk of flooding, inundation and landslides. The city of Natal, capital of the state, is among the locations with the highest risk of disasters, aggravated by the occurrence of heavy rains in the region, associated with areas of socio-environmental vulnerability. The Mãe Luíza neighborhood, located in Natal, is characterized as one of the most vulnerable areas to disasters. This popular neighborhood, with approximately

17,000 inhabitants, is located in the coastal region of the city and borders Parque das Dunas - a reserve of 1,172 hectares of Atlantic Forest - and with upscale neighborhoods in the city of Natal, where the square meter is the most expensive in the city. These characteristics make the neighborhood a highly coveted region for entrepreneurs in the construction industry, hotel industry, real estate agencies and commercial establishments.

Aware of the impacts that disasters can cause, the United Nations Secretariat for Disaster Risk Reduction – UNISDR has developed and implemented actions with the aim of reducing disaster risks and promoting community resilience in cities, based on ethics prevention (UNISDR, 2015). The actions planned by UNISDR (2012) are based on the Hyogo Action Framework – MAH (EIRD, 2005) which

defined the conditions for a safer world for the period from 2000 to 2015. MAH actions were reformulated in March 2015 during the IIIrd UN World Conference on Disaster Risk Reduction, which took place in Sendai, Japan and redefined the global commitment to address disaster risk reduction and increased resilience in the context of sustainable development (UNITED NATIONS, 2015, p. 02).

In 2012, Brazil enacted Law No. 12,608 (BRASIL, 2012), which gives municipalities, states and the federal government responsibility for planning and executing actions to reduce disaster risks in the country and develop strategies for promoting community resilience. One of the fundamental strategies for this achievement is to involve the community in actions to reduce the risk of disasters in order to guarantee the efficiency of actions with Civil Protection and Defense bodies.

The objective of this work is to present and discuss the solidarity actions undertaken by residents of the Mãe Luíza neighborhood during the response and recovery phase of the disaster that occurred on June 14, 2014, destroying 19 houses and leaving 26 families homeless.

# 2. THEORETICAL FRAMEWORK

#### 2.1 Disasters

As described in the report prepared by the International Strategy for Disaster Risk Reduction - ISDR (2004), disasters can be understood as a serious disturbance in the functioning of a community/society causing human, material, economic and environmental losses that exceed the capacity of the community/society. affected society to deal with the situation using its own resources.

The disaster "is not a physical event (...), it is a social occasion". For Quarantelli in Perry et al (2005, p. 343), it is not appropriate or sufficient to use the term "natural" disasters, because disasters do not happen outside of human actions and decisions and their societies. Quarantelli in Quarantelli (1988b) understands that human beings are, in a certain way, "those responsible for vulnerability" (QUARANTELLI in PERRY et al, 2005,

P. 344) and "if there are no negative social consequences,

there is no disaster" (QUARANTELLI in PERRY et al, 2005, p. 347).

# 2.2 Community Resilience

Hollnagel (2010) defines resilience as the intrinsic capacity of a system to adjust its functioning before, during or after changes and disturbances. According to Kulig et al (2008), community resilience can be understood as a theoretical framework and social process capable of explaining how communities develop resilient responses to external forces, such as: economic crises, disasters and other threats to sustainability.

Community resilience represents the ability of a community to function in the midst of crises or disruptions. "Community resilience is perceived as a fundamental element in emergency preparedness and as a means of ensuring social stability in the face of crises, including disasters" (COHEN et al, 2012, p. 1732).

## 2.3 Solidarity

According to Alcântara et al (2013, p. 216), in a disaster situation, when people identify themselves as susceptible to the same threat, they assume supportive and collaborative attitudes when they realize that each person's struggle is everyone's struggle. In situations like this, the feeling of being part of the community is usually great. According to the authors, the feeling of being part of the community is stronger when the difficulties are greater. "It seems that there is a potential for union and solidarity as a result of the need for survival" (ALCÂNTARA et. al., 2013, p. 217).

Regarding the actions carried out by the members of a community, Diniz (2008, p. 32) argues that these are capable of having a positive or negative impact on all members. Solidarity, for example, would be capable of stimulating attitudes of support and care for one another, however, it requires dialogue and tolerance, in addition to presupposing ethical recognition and co-responsibility.

## 3. METHODOLOGY

This research adopted the Community Ergonomics – CE approach, which is based on the participation and involvement of members of poorer urban communities in decision-making processes and actions relating to socioeconomic demands (COHEN, 2000; COHEN &

SMITH, 2001), neglected by the policies and/or actions of public authorities.

CE privileges the creation of spaces for collective dialogue, allowing the community to identify (SCHMITZ, 2000, p. 597-598), discuss and resolve their problems. Furthermore, it is characterized by the "adequacy between technological mediations and the experiential, structural and practical dimensions of the community" (SCHIMTZ, 2000, p. 148).

For Darses & Reuzeau in Falzon (2007), participation contributes to personal development and will only be truly effective and effective if the people involved find an individual interest in participating and see their participatory efforts rewarded. Participation, according to these authors, does not in itself contain its own conditions for success, in such a way that it requires social and individual prerequisites and needs to be an agreed modality of action, in addition to contributing to the development of skills and to the improving communication and integration between individuals.

With regard to disaster risk management, Community Ergonomics can assist in the perception of risk by the community, in the diagnosis of damage caused by the disaster and in the development of strategies and actions to face the disaster and risks in a resilient manner.

This is qualitative and field research, carried out in the neighborhood of Mãe Luíza, located in the eastern administrative region of the municipality of Natal, capital of the state of Rio Grande do Norte.

The research sample comprises 26 people who agreed to participate in the research, but this article refers to 18 people who have already participated in the research, namely: those affected by the disaster that occurred in the Mãe Luíza neighborhood, who had their homes destroyed or damaged and who received solidarity actions or witnessed solidarity actions or heard about solidarity actions carried out before, during and after the disaster; residents who carried out solidarity actions immediately before, during and after the disaster; residents who did not have their homes or establishments affected, who witnessed solidarity actions undertaken by other residents immediately before, during and after the disaster.

The research took place through the application of a

conversation script to each of the subjects in the sample. This sought to identify the solidarity actions developed by residents, the reason for these actions, the bond between the people involved in the actions, the perception of each author of the action about the help they provided, the perception of the person who was helped about the action received and whether the research participants believe that the solidarity actions carried out, and listed by the research subjects, were important for the disaster not to have caused victims and for improving the community's resilience in facing risks and disaster.

Furthermore, we sought to verify the sample subjects' perception of the performance of the municipal Civil Protection and Defense body in actions related to disaster risk management, mainly in its response phase, which include, among other actions, rescue and the evacuation of all victims from the risk area.

It is worth noting that all individual conversational actions were filmed for greater efficiency in recording reports and to facilitate transcription and data processing.

## 4. RESULTS AND DISCUSSIONS

The heavy rains of 285 mm that hit the city of Natal, on the 13th and 14th of June 2014, caused an intense landslide in the neighborhood of Mãe Luíza, on the 14th of June, which resulted in the formation of an immense crater, affecting the lives of more than 187 families, of which 26 had their homes completely destroyed.

Even before the disaster occurred in Mãe Luíza, a small hole had formed in one of the neighborhood's main roads and became a cause for concern among residents, who reported the problem to the Rio Grande do Norte Water and Sewage Company (CAERN). ) and the Municipal Department of Public Works and Infrastructure (SEMOPI), but they did not solve the problem immediately, worsening it until the disaster occurred.

The disaster revealed that the Mãe Luíza neighborhood, despite being an area vulnerable to disasters, did not receive preventive, mitigating and preparedness actions from the disaster risk management body, the Municipal Secretariat of Public Security and Social Defense (SEMDES).

Extracts from residents' reports on the actions of public

bodies before the disaster corroborate the statements above:

"Yes, I called, the times we needed to, we called and asked them to come...". "(...) the problem got worse, and they saw it and didn't return, they didn't do the work that should have been done. I didn't know which one was supposed to be done, so when the rain came the soil was already very wet, very compromised, so there was no way to hold it back..." - Resident "C".

Residents also reported that, as the situation worsened, agents from SEMDES and the Municipal Department of Labor and Social Assistance - SEMTAS warned residents of a few houses close to the place where the disaster occurred, about the risk of disaster and advised them to look for a safe shelter. However, some of these people did not leave the place of risk immediately, because they were not previously and systematically prepared to act in a disaster risk situation and, therefore, did not believe that the disaster could happen and affect them in the proportion that ended up occurring.

"Three days before the hole that had already been created, social assistance came, civil defense came, ordering us to go to our relatives' house, get our things..." "No one wanted to leave, they just left." when everything collapsed." "Because I thought it wouldn't happen that badly" - Resident "A".

During the disaster, the role of community members in rescuing and evacuating victims was fundamental due to the following: 1) the number of agents from the civil protection and defense agency was insufficient to serve all the people affected at that time; 2) this body's team did not have adequate and sufficient equipment to assist and guide the population when leaving the risk area; 3) the agents were insufficiently prepared to coordinate and execute the evacuation actions of the population from the risk area; 4) there were, in the risk area, children, elderly people, people with reduced mobility and people with disabilities, without autonomy and dependent.

Coordination, communication and help between neighboring residents was very important for all people to be rescued and evacuate from the risk area alive. Residents' reports illustrate how voluntary solidarity actions carried out by community members took place during the response phase.

"He saw that the business was really going down, right? Then he ran, right? 'Come on mom, come on mom and... and it won't take long at all, let's go soon'... and then that's it, it's already catching on...". "My son was the one who picked me up and took me, then he put me in the car and took my daughter there with a boy, then I went to my sister's house, up front" - Resident "E".

"First my husband left me with the children and the dogs at my mother's house, in the other neighborhood, and came back with a colleague of ours and then joined me with my son-in-law and then, so I could take him out (Resident "J" – Physically Disabled) from inside the house. When he took it off... the ladder gave way, the post fell, it was all... it was all crazy like that (sigh)...." - Resident "G".

"Suddenly we managed to allocate everyone. No one was left homeless! Suddenly one (person) gave up part of the house, another (person) gave up the room" - Resident "D".

"Resident "Y" had a kitnet and put a lot of people there to live there..., like that, for free, until they decided who was going where, whether it was for relatives, for school, somewhere, right?! He helped a lot." "I went to a friend of mine's house. She gave me some clothes and I went to sleep at someone else's house." "We've already had a lot of help, right?! In clothes, right?! Clothes... shoes..., sometimes even diabetes medicine... so we run out of clothes, right?! And it came out, right, a lot came out, right?! They had a fair, right?! There was also a fair, for everyone, right?!" - Resident "A".

100% of the residents surveyed believe that the solidarity action carried out or received was quite efficient, but they assume that they were not prepared to face the disaster. 100% of those surveyed also responded that they did not believe that the gesture of solidarity worsened the risks and

consequences of the disaster, because, according to them, given the inefficiency of the municipal Civil Protection and Defense agency, residents needed to act so that no one died. Solidarity and love for others were cited as the reason for the help provided by one resident to another:

"My love, I think it was love and solidarity, you know? Because we like this, we spare no effort in thinking and saying - 'this could happen to me, I can or a house falls on top of me...'" - Resident "D".

"The basis of this is... it's love, you know?!
Because if we don't have it, yeah... if we have that
little bit of love and don't use it, it's worthless,
right?!" - Resident "G".

It was also verified, in the residents' reports, that they carried out several solidarity actions, such as: warning communication, escape communication, rescue, help during evacuation, transportation to shelters, provision of spaces to welcome victims and temporary shelter, donations, etc.

## 5. CONCLUSION

Although spontaneous actions of solidarity by the population occur during disaster situations, the negligence or weakness of action by disaster risk management bodies further contributes to the population carrying out solidarity actions to mitigate the risks and damages of disasters.

Solidarity actions may or may not improve community resilience in facing risks and disasters. The identification and evaluation of resilient solidarity actions can help civil protection and defense bodies in planning and preparing community members to better cope with risks and disasters.

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