


SPEECHES ON DISASTERS IN SOUTHERN PERNAMBUCO

 <https://doi.org/10.56238/arev6n4-145>

Submitted on: 10/11/2024

Publication date: 10/12/2024

Jhenyffer Lays Ribeiro Silva¹, Juliana Catarine Barbosa da Silva², Jullyane Chagas Barboza Brasilino³ and Polyanna Camelo Travassos de Arruda⁴

ABSTRACT

The present research had as its scenario the Southern Agreste of Pernambuco, aimed to analyze the discourses of representatives of Governmental and Non-Governmental Organizations regarding disasters, specifically droughts and extreme rainfall. It adopted a qualitative approach, conducting nineteen semi-structured interviews and a workshop. Both were recorded, transcribed and submitted to discourse analysis guided by Discursive Social Psychology. As a result, we found that both droughts and heavy rains have a negative impact on the economy, work, living conditions and the environment. With the exception of one organization, all the strategies presented by the participants to deal with the disasters mentioned are of an emergency nature. In the actions carried out there is no popular participation or the presence of psychologists, even though there are studies that indicate the negative repercussions of disasters for mental health. We conclude that although droughts and heavy rains are natural phenomena, their effects cannot be naturalized. It is necessary to improve public policies aimed at disaster prevention, with a focus on the involvement of the population and also the insertion of professions in the human and social sciences, such as Psychology.

Keywords: Disasters. Dry. Rains. Agreste Pernambucano. Environmental Psychology.

¹ Psychologist from the University of Pernambuco

ORCID: <https://orcid.org/0000-0001-5258-7948>

E-mail: psicojhenyffer.lays@gmail.com

² Dr. in Psychology (UFPE/PE). Professor of the Undergraduate Course in Psychology and the Graduate Program in Health and Socio-Environmental Development (PPGSDS/UPE) at the University of Pernambuco/UPE.

ORCID: <https://orcid.org/0000-0002-1632-3424>

E-mail: juliana.catarine@upe.br

³ Dr. in Social Psychology (PUC/SP). Professor of the Undergraduate Course in Psychology and the Graduate Program in Health and Socio-Environmental Development (PPGSDS/UPE) at the University of Pernambuco/UPE.

ORCID: <https://orcid.org/0000-0003-1785-1031>

E-mail: jullyane.brasilino@upe.br

⁴ Master's student in the Graduate Program in Health and Socio-Environmental Development (PPGSDS/UPE) at the University of Pernambuco/UPE.

ORCID: <https://orcid.org/0009-0006-5400-4287>

E-mail: polyannacamelo.travassos@upe.br

INTRODUCTION

The topic of disasters in Psychology is a field that is still developing, the first studies in the area began around the twentieth century and until recently were restricted to a clinical and diagnostic approach. In Brazil, the first record of the insertion of Psychology in the study, analysis and intervention in emergencies and disasters dates back to September 13, 1987, when the accident with Cesium-137 occurred in Goiânia, which became known as one of the largest radioactive accidents in the country (Schmitz; Souza, 2022; Trindade, Serpa, 2013).

From this point on, Psychology in emergencies and disasters began to be more discussed and today it has been debated in all Regional Councils of Psychology (CRP) through symposia, publications and debate forums, in addition to this area having guidelines based on specific technical notes prepared by the Federal Council of Psychology (CFP). Currently, the work of psychology professionals in emergency and disaster situations is related to the civil defense policy published on May 8, 2013 and their interventions range from prevention to post-disaster, working together with different sectors (Federal Council of Psychology, 2021; Schmitz; Souza, 2022). According to the Technical References for the performance of psychologists in the comprehensive management of risks, emergencies, and disasters, from 2021 prepared by the CFP,

Psychology should also be incorporated into the Civil Defense teams as an agent that organizes lines of care and community mobilization, listens, welcomes and acts in the defense of the population before (prevention, mitigation and preparation), during (response) and after (repair/reconstruction) disaster situations (p. 60).

Therefore, it is detached from a Psychology that presents an exclusive focus on the individual, with clinical and diagnostic emphasis. Regarding the theme of disasters, our study is close to Discursive Social Psychology (PSD), which discusses the social, historical, and economic context in which people are inserted, prioritizes "discourses as active elements of social invention, and conceives the processes of construction of subjects based on social relations" (Silva, 2017, p. 20). To continue the debate on disasters, we will briefly discuss how this phenomenon presents itself in the territories covered during this research. According to Quarantelli (2015), there is a lack of consensus regarding the study of disasters. For Cartaxo and Shiota (2020), this absence of consensus is one of the characteristics of the humanities and social sciences, since there is a variety of theoretical perspectives and worldviews. For the aforementioned authors, there are

three conceptions of disasters from a sociological point of view: 1) disasters as an expression of an intimidating external agent; 2) disasters as a social expression of vulnerability; 3) disasters as a state of uncertainties generated by the institutions themselves.

The conception of disasters as an expression of an intimidating external agent originated in war models and focuses on external and natural causes, the so-called *natural hazards*. In this paradigm there is a separation between society and nature, disasters would be uncontrollable, almost predestined, and the population would only be able to respond to these "attacks" immediately. In contrast to this perspective, there are researchers who understand disasters not as external natural phenomena, but rather as the result of social relations and mutual influence between people and nature. It is of interest to these scholars to understand the social, economic, political and environmental conditions that precede disasters and how they are related to such situations, that is, how disasters can be a social expression of vulnerability (Cartaxo; Shiota, 2020).

In this second conception, there are authors who will bring a discussion about risk and vulnerability and, although these concepts are close, they are different, according to Cartaxo and Shiota (2020). The precursor of the discussion on the theory of risk is the German sociologist Ulrich Beck (2010) who, in his book "Risk Society: Towards Another Modernity", brings us that "the social production of wealth is systematically accompanied by the social production of risks" (p. 23). For the author, risks represent an intermediate stage between security and destruction and must be constantly analyzed, "because these have local and global factors, assuming a transscalar dimension with a potential threat to all social classes" (Cartaxo; Shiota, 2020, p. 303). For Beck (2010), risks are objects of unequal distribution, just like wealth, they reinforce class society and, although initially the impoverished populations are the most affected, at some point the rich and other people who produce or benefit from the production of these risks will also be.

Regarding the concept of vulnerability, Freitas *et al.* (2012, p. 1578-1579) bring us that it concerns the

[...] social processes related to the precariousness of living conditions and social protection (work, income, health and education, as well as aspects related to infrastructure, such as healthy and safe housing, roads, sanitation, for example) that make certain population groups (for example, women and children), especially among the poorest, vulnerable to disasters [...].

Corroborating the authors, Cartaxo and Shiota (2020) will bring us that vulnerability "determines the intensity of the damage caused by the effective occurrence of risk for a given territory" (p. 305) and that both risks and vulnerabilities contain different processes of multi-scale construction. Thus, they point out that disasters are related to both categories, since both "reveal social problems and expose the weaknesses of the social structure" (p. 306).

In relation to the third perspective, that of disasters as a state of uncertainties generated by the institutions themselves, they show how disasters tend to admit a meaning that is more convenient for some institutions. Whether for political or economic reasons, such entities generate uncertainties in the population and disregard their capacity for reflexivity in the face of such a phenomenon (Cartaxo; Shiota, 2020). In the present work, we approach the second perspective presented, although there are natural factors that we cannot disregard, we start from the idea of disasters as a social construction, focusing on the constitution of understandings about how institutions influence the phenomenon, as well as the third paradigm.

We also point out as interesting the classification made by Freitas *et al.* (2012), which differentiate disasters into intensive and extensive. The former are characterized by having a low frequency and being geographically concentrated with great impact potential, such as earthquakes, tsunamis, hurricanes, among others. Extensive cases, on the other hand, despite being individually small, happen with great frequency in a period of time and are responsible for causing great damage to local infrastructure, housing and living conditions of impoverished populations. Examples of extensive disasters include heavy rains and what they cause, such as floods and landslides, as well as drought. These types of extensive disasters are those that we will dedicate ourselves to understanding in this text. With regard to drought, it is also valid to bring its difference in relation to drought, since they are often seen as synonymous: while the first is caused by insufficient rain and causes a sustained reduction in water reserves for a prolonged period, the second is characterized as a period in which there is little or no rain, whose loss of soil moisture is greater than its replacement (Brasil, 2002; Grigoletto *et al.*, 2016).

According to data from the National Confederation of Municipalities (2023), between January 2013 and February 2023, the main disasters present in Brazilian municipalities were: first, drought (41%) and second, rainfall (27%). The research also points out that droughts and excessive rainfall have been increasingly frequent and severe in the

municipalities and, in relation to Pernambuco, Souza (2011) points out that this is a state that needs to live with these two types of antagonistic disasters. About the Agreste, the focus of our research, it is a region that produces several agricultural crops that supply various parts of the State of Pernambuco, thus moving a large part of the regional and national economy (Andrada *et al.*, 2018). However, both periods of drought and intense rainfall not only impair its productive capacity, affecting its economy, but also contribute to social and environmental losses and even human lives, especially those located in poorer communities (Souza, 2011).

The National Confederation of Municipalities (2023) also points out that from 2013 to 2023 disasters caused R\$ 401.3 billion in losses throughout Brazil, with droughts responsible for R\$ 307.2 billion (76.5% of the total) and rains for R\$ 79.3 billion (19.7%). During this period, the Federal Government made R\$ 4.9 billion available for disaster risk management actions in relation to the damage caused by the calamities that devastated the country. However, these resources paid represent only 1.2% of the losses accounted for over ten years. In addition, the research also pointed out that the resources made available by the federal government for risk management, protection and civil defense actions have been decreasing considerably over the years, in addition to not allocating amounts for prevention in the budget, with the municipalities then being responsible for acting only in response, that is, when the disaster has already occurred, which entails great responsibility for them.

Corroborating the data mentioned above, Cartaxo and Shiota (2020) show us that government actions have been restricted to investing in containment and post-disaster recovery works, without worrying about the development model present in the region, a factor that can intensify the damage generated. For the authors, the ideal is to establish public policies collectively, which contemplate both academic and professional knowledge, as well as popular knowledge. It is evident that such policies should be created with the aim of preventing disasters and not only containing them when they occur. Considering all this, we present as a general objective of our work to understand the discourses of representatives of Governmental Organizations (OGs) and Non-Governmental Organizations (NGOs) of the Southern Agreste of Pernambuco with regard to emergencies and disasters specific to the territory. As specific objectives, we sought to identify the discourses of these collaborators on the repercussions of droughts and extreme rainfall

events present in the researched region, and to analyze and discuss the strategies presented by them to deal with such phenomena.

METHODOLOGY

The present study is part of an umbrella project, approved by the Research Ethics Committee of the University of Pernambuco and follows all the guidelines of resolutions No. 466/2012 and 510/2016 of the National Health Council, with regard to research with human beings. Our proposal sought to analyze the discourses of representatives of Governmental Organizations (OGs) and Non-Governmental Organizations (NGOs) from nineteen municipalities in the Southern Agreste of Pernambuco, with regard to emergencies and disasters particular to the territory. In relation to the OGs selected for the research, the Civil Defenses of each municipality stand out, and this choice was made because the people who are in charge of these instances present, according to a sociological approach, a *technical expertise* in disaster management, that is, they are characterized by being specialists "responsible for the implementation of public policies and disaster protection programs, among which directors, planners, consultants, technicians, etc. stand out." (Mattedi, 2017, p. 274).

Civil Defense can be defined as a "set of prevention and relief, assistance and reconstructive actions, aimed at avoiding or minimizing disasters, preserving the physical and moral integrity of the population, as well as reestablishing social normality" (Brasil, 2010, p. 20). The disaster reduction actions carried out by the Civil Defense comprise the stages that are part of the Disaster Management Cycle, which are: prevention, mitigation, preparation, response, recovery and reconstruction. Prevention refers to activities aimed at reducing the occurrence and intensity of disasters; mitigation encompasses strategies adopted on an emergency basis to reduce or avoid their consequences; preparation is related to knowledge and the ability to predict, respond to, and recover from the impacts of these phenomena; the response refers to emergency procedures, performed during or after the adverse event; and recovery is understood as actions taken after the emergence of disasters with the aim of returning to what it was before the adverse event occurred (Brasil, 2017; Furtado *et al.*, 2013; Londe; Soriano; Coutinho, 2015).

As for NGOs, they make up the so-called third sector. In the first sector we have the State, in which in this work is represented by the Civil Defense presented above, and in the second the market. The third sector is characterized by private organizations, but with

public purposes, and has a performance that dialogues with the State, whether in a parallel or complementary way. The term "non-governmental organizations" dates back to the post-war scenario where independent transnational organizations, which were not created or maintained links with governments, played a fundamental role in the reconstruction of what had been destroyed by the war. The role of Brazilian NGOs then continues to transform, in which they become an important spokesperson on issues such as human rights, hunger, and the environment (Cavalcanti, 2019).

Both the discourses of the OGs and the NGOs were accessed through semi-structured interviews and workshops. According to Batista, Matos and Nascimento (2017), the interview is a method that is characterized as a form of social interaction, which "values the use of the word, a symbol and privileged sign of human relations, through which social actors construct and seek to give meaning" to what surrounds them (p. 5). As for the semi-structured interview, this occurs when the researcher presents some guiding questions, but is not limited to them, since other questions may arise from the participants' discourses. In our proposal, the interviews aimed to understand the professional work of the participants with regard to disasters, in addition to more personal information, such as color, gender and education, questions were also asked about the organizations: their origin stories, their objectives, existing positions, among other issues. In view of this, nineteen people were interviewed, eighteen of the interviews took place *online* and one in person. Of these people, sixteen were representatives of civil defense and three of NGOs.

In addition to the interviews, we held a workshop with representatives of the Civil Defense and NGOs. For Joaquim and Camargo (2020), the Workshops aim at the production of knowledge combined with the debate of ideas. Starting from a previously elaborated question, which in our case was based on the theme "Prevention and Reduction of Disaster Risks in the Agreste Pernambucano", and also by the use of different practices as discussion triggers, the group formed by workshop participants and participants met "to dialogue and conjecture about possible referrals for the topics in question" (Joaquim; Camargo, 2020, p. 10). The workshop was attended by four people, three representing civil defense and one was part of an NGO. Two people participating in the workshop had also been interviewed previously.

Both the interviews and the workshop were recorded and transcribed by reading and signing the Informed Consent Form (ICF). For the analysis, we used a qualitative approach presenting Discursive Social Psychology (PSD) as a theoretical-methodological framework.

For Potter *et al.* (1990), the PSD presents three fundamental principles in relation to discourse: it has a function, it is constructed and it presents variation. The term function emphasizes that all discourse is action-oriented, since people daily employ discourses to do things, such as asking, accusing, requesting, explaining, communicating; it is constructed because we do not deal with the world in a direct and immediate way, but rather in a way mediated by pre-existing discourses constructed by society, that is, from pre-existing linguistic resources such as a set of terms, narrative forms, metaphors and commonplaces, a discourse can be raised, and this discourse involves choice and selection of possibilities, since what is chosen to be said depends on the orientation and interests of the speaker; and the discourse has variation, since depending on what one wants and the countless possibilities of choice, different types of discourses can be used, even to describe simpler things (Macêdo; Souza, 2020; Potter *et al.*, 1990).

RESULTS AND DISCUSSIONS

The participants in our study have an average of 5 years of professional experience. Regarding the position they hold in the institution, 9 act as civil defense coordinators, and among these, 2 also assume functions in the Secretariat of Agriculture, 3 are secretaries of Agriculture, 1 is an assistant to the secretary of Agriculture, 2 are presidents of NGOs, 1 is an NGO volunteer, 1 works in the executive part, 1 is a brigade leader, and 1 is an engineer. Regarding gender, 14 people identify with masculine, 2 with feminine, 2 could not say, 1 calls himself a trans man, and 1 was not questioned. Regarding color, 9 people declared themselves white, 6 brown, 1 black, 1 brunette, 2 could not say and 1 was not questioned. Finally, regarding education, 6 claim to have higher education, 5 mention having high school, 3 with a postgraduate degree, 3 with technical education in different areas each, 1 having a master's degree, 1 did not mention it and 1 was not questioned.

The 19 interviews and workshops provided discursive material that was systematized in this work in two groups, which in turn were distributed in subgroups. In the first block of analysis we will present and discuss the repercussions of droughts and rains in the Southern Agreste of Pernambuco, and in the second block we will focus on the strategies used to deal with these phenomena in the researched region. In order to protect the identities of the people participating in the research, their names will not be mentioned throughout this work, it was decided to number them from 1 to 21 preceded by the acronym OG, representing a member of a Governmental Organization, or NGO, meaning a

participant of a Non-Governmental Organization. The names of the municipalities were also suppressed from the speeches presented.

REPERCUSSIONS OF DROUGHTS AND RAINS IN THE SOUTHERN AGRESTE OF PERNAMBUCO

Drought can act on ecological, economic, social and cultural systems, and can cause damage and damage to the living conditions of populations exposed to this type of disaster. The magnitude of its impacts is directly related to its duration and the socioeconomic conditions of the affected regions and communities (Alpino; Seine; Freitas, 2016), that is, although drought is a natural disaster, it can also be seen as an expression of social vulnerability, a discussion that we have already seen previously in the introduction of this work.

In addition, with regard specifically to Pernambuco, the region where our survey was conducted, data from the Brazilian Institute of Geography and Statistics – IBGE (2020) showed that, even though 74.7% of the population had a network water supply in 2019, only 28.7% of them had access to this water with a daily supply. In the aforementioned year, the state also faced situations of water shortage, which led to the declaration of emergency in several municipalities due to the severe drought. With regard to rainfall, Geraldi (2009) exposes that due to the poor structuring present in most Brazilian municipalities, they cause numerous inconveniences, especially when we refer to episodes of extreme rainfall. For Sousa *et al.* (2016),

Extreme rainfall or maximum daily precipitation is characterized as an event that has critical intensity, duration, and spatial-temporal distribution in a given location (municipality, city). The study of the frequency of occurrence of extreme events is fundamental to understand their effects on the surface of the rural and/or urban watershed. In addition, the projects of hydraulic works within the basin depend directly on this study. Heavy rainfall or extreme rainfall causes damage to cities, soil erosion, flooding, damage to agriculture, and serious problems in water storage reservoirs. (p. 431).

In this sense, we can say that intense rainfall events are associated with various types of disasters, such as floods, floods, landslides, among others, generating various types of damage, especially to the most impoverished populations. However, it is worth noting that, as Geraldi (2009) brings us, the rains are not the cause of the problems in themselves, they only act "in the sense of 'revealing' the latent risk in that territory" (p. 107), since they highlight the difficulties caused or covered up by territorial planning and the lack

of preventive public policies. Even the irregularity of the intensity and distribution of rainfall can be seen as phenomena produced by human interventions, given issues such as deforestation, fires and global warming (Koga, 2009).

Based on all that has been exposed, when talking about the repercussions of droughts and extreme rainfall, we propose to understand how these phenomena affect the municipalities of the southern agreste of Pernambuco, and consequently their residents, whether socioeconomically, politically and even environmentally. To organize the debate on the theme, after analyzing the material produced, we divided the first block into two subgroups: Drought and its influences on the researched territory; The other side of the coin: the implications of the rains in the Agreste of Pernambuco. Both will be shown and discussed below.

Drought and its influences on the researched territory

One of the elements that at first draw attention in our analysis concerns the fact that two participants pointed out that a state of emergency had to be declared in their municipalities due to drought, which was mentioned by them and other participants as a phenomenon that directly interferes with agriculture and livestock, the main activities carried out in the researched territories. As we can see in the following excerpts from the interview: "[...]. There... Our municipality is also... Our main activity is family farming, which over the years has been suffering due to drought and such, [...]" (Participant 17OG – interview).

[...]. Because that's what drought is all about, it's a lack of water. We try our best to make this possible. We help with hose support for irrigation needs, because the drought affects this a lot, the production of crops, agriculture and also livestock. We try our best to make this adjustment with rural producers. (Participant 6OG - interview)

According to the discourses presented, drought can generate a partial or total loss of agricultural crops, a situation seen as an unpredictability that causes a lot of damage to the people who derive their livelihood from these crops. This situation is also presented in the discourse of participant 17OG who brings a personal experience about this problem:

Here in S. we had a period of drought, to the point that even our family, in a way, was harmed. Okay, my father. My father raises cattle and until a few years ago, I don't remember for sure, he had a land that was too rich in water, and it was so dry there that he had to move his cattle to S.T. Which in our minds S.T. is drier, right. No... But for a while he had to take the cattle there so as not to have a total loss of these

animals. [...]. But like, in our region we have already had a lot of cattle loss, yes... In addition to the drought, the domestic problems even due to this drought, this lack of water distribution. (Participant 17OG – workshop)

For Alpino, Sena and Freitas (2016), this impairment in agricultural and livestock activities generated by drought causes a series of adversities, first because the loss of agricultural crops and herds generates economic losses, since such activities represent sources of income and work for many families. Second, such losses can affect food consumption both in its quality and quantity due to water scarcity and/or contamination and even due to lack of basic sanitation. The economic losses mentioned above also affect the purchasing power of food, which end up negatively affecting the nutritional status of populations, causing a series of diseases (Alpino; Seine; Freitas, 2016). Another element to be highlighted by some participants refers to the drought affecting people in the rural area more than residents in the urban area, as can be seen in the discourse of participant 10G:

We know that the entire rural area of the municipality suffers a lot from the issue of drought [inaudible] in the rural area [...].
Interviewer: I see. So it's usually more the rural population, right?*element*. [is interrupted by the interviewee].
Interviewee: Because the droughts, the droughts are more constant, right. Even today we have an emergency situation decreed by drought we managed to do it after a lot of work now at the very end of February... January. (Participant 10OG - interview)

The issue of drought affecting people located in rural areas makes sense in this context because previous discourses mention the impact that this phenomenon has on agricultural and livestock activities, which are concentrated in rural areas. According to the Continuous National Household Sample Survey applied in 2023 by the Brazilian Institute of Geography and Statistics (IBGE, 2024), 3.2 million households experienced quantitative food deprivation, with the highest percentage of severe food insecurity in rural areas, with a predominance in the Northeast Region (7.7%).

In a study carried out with rural families in the region of Frederico Westphalen in Rio Grande do Sul, Favero (2006) sought to understand how drought was experienced by them. The people interviewed also brought up the impact of droughts on agricultural crops, on their income, which caused their spending not only on food, but also clothing and leisure to be reduced, in addition to the scarcity of water for human and animal consumption, factors that directly impact the quality of life of those affected. The author also reports that the people interviewed sought alternative forms of access to water, showing concern about

its quality. According to Araújo *et al.* (2015), in Brazil most investments in water supply services occur in urban areas.

Finally, we highlight the speeches of participants who point to drought as something inevitable, which is always expected, characteristic of the region and therefore requires planning to reduce impacts, as we can see in the following excerpt:

[...]. We have the drought, which is something that everyone knows will happen. I arrive here, for the morning, in the middle of winter in June/July and already start to joke about winter and that October is coming. Everyone knows that in October, November and December there will be drought, right? Then it's something that we already get used to, we already have to plan. Mitigate the effects to be, [...]; So, yes, ways to reduce the impact. The impact will have, the impact will have. But we can reduce this impact. (Participant 16OG - interview)

For 16OG, if drought is already expected every year, then there must be planning, preparation for when that moment arrives, so that the damage is minimized. Suede *et al.* (2016) following this thought, point out that although drought is a natural phenomenon, its effects on people's lives should not be naturalized either, quite the contrary. As we have seen in this topic, drought can have numerous repercussions: it interferes with social (such as health and employment), economic (influences income and purchasing power), political (ways found to deal with drought) and also environmental (changes in the environment) aspects.

Therefore, for Camurça *et al.* (2016), it is possible to learn about the drought process and "undertake actions to reduce its harmful consequences" (p. 120) in accordance with what participant 16OG brought us. And this is only possible from a position and action that aims at living with it to the detriment of the idea of fighting it. Living together does not mean passively accepting the implications that drought can cause, but rather an active movement, the undertaking of strategies, especially collective ones, that allow for a higher quality of life in all areas of human existence. In this sense, it is essential to implement public policies "that emphasize sustainable practices that are consistent with local needs and possibilities" (Camurça *et al.*, 2016, p. 126).

The other side of the coin: the implications of the rains in the agreste of Pernambuco

Regarding the rains and the disasters associated with them, in the municipalities investigated, the episode that began in June and followed between the following months in 2022 was much commented on, where in the vast majority of these cities the rains that occurred in this period were considered extreme and unpredictable. Four of

the participants claimed that an emergency was declared in their municipalities, as we can see in the following excerpts from the speeches:

[...], but it was an effect like that, let's say.. Not common, because it rained 100 mm in one rain only and some small dams that had in the course of that water it.. It broke and the water caught hard, but it was an isolated case and there is no record of at least 6 years ago, of a similar situation having occurred. (Participant 10OG - interview)

[...] Last year there was a situation here of heavy rains, in July, right? [inaudible] of crisis, we also requested federal recognition of an emergency situation and it was recognized then we joined Assistance, Infrastructure, yes.. Works, to respond to the disaster with the population, right. (Participant 10G – interview)

The unexpected intense rains caused a lot of damage to the municipalities, as one of the examples we had the risk and/or rupture of dams and reservoirs, having to be activated several services and requiring joint work to minimize the damage, as previously pointed out by participant 10OG. Such situations indicated concern in relation to the harm that could be caused not only to people living in each municipality, but also to those of other surrounding areas, as reported by participant 12OG.

There was a collapse here of a reservoir, but with the quick action of the civil defense with the infrastructure, we managed to keep the reservoir intact still. Yes, and with that we managed to preserve it. It's the question of both the people here. There were plantations in and around them, as well as the residences that were nearby, because the reservoir was of medium size. And with that, it could cause a very big collapse situation. Issue of the residences that had below. Very disastrous, even if it had happened, but we were very fast and managed to recover and also keep him stable. **(Participant 12OG - interview)**

Regarding dams, Gonçalves, Marchezini and Valencio (2009) point out that although their constructions generate capital and employment, they are characterized as an expression of a characteristic type of risk: manufactured risk. Such risk for the authors is "socially created, by the interaction and impact of knowledge and transformation of the world by human beings" (p. 161). They also bring us that the perception of dams as a risk only occurs when the disaster occurs, that is, when there is a collapse generating several losses. In addition to the risk and/or rupture of dams, the participants also reported the threat and/or overflow of rivers and dams that pass through the municipalities, as we can see below:

[...] another issue also due to the rains in July is recently, was that the, the dam, the J. dam is practically inside the city so when it overflows the population panics, right,

afraid and this year it overflowed, it is still overflowing and we have been monitoring and following this whole process. (Participant 11OG)

The fear and risk faced by people in relation to the flooding of rivers and dams are very valid, since according to Souza (2011) "this phenomenon is usually surprising for its violence and less predictability, requiring complex monitoring" (p. 11). For Assumpção *et al.* (2017), floods result from the lack of public policies and which has been increasingly intensifying due to the "increase in the disorderly urbanization process, without urban planning accompanied by drainage infrastructure and adequate management of rainwater" (p. 40). The heavy rains that affected the municipalities investigated also had repercussions on several housing damages for populations living in both rural and urban areas, such as cracks and collapses of houses, where dozens of people were left homeless and displaced, in addition to the impossibility of locomotion, especially for residents of rural areas, as we can see in the following speech:

It had a lot of damage, both in rural and urban areas. I think 90% were left without having been even to walk the people here. [...]. Some houses fell, wall and tile. That kind of thing, right? In the rural area, we also had a lot of damage due to that rain. Clear. A lot of work, there was even the fire department called here for us to rescue a pregnant woman who was stranded. She was very close to having a baby and we worked until Sunday to get her out there. [...]. (Participant 2OG – interview).

According to Marchezini (2009), our house can be seen as a territory that allows for various images and meanings: on the one hand it can represent a construction that serves as a shelter, on the other, a symbolic space of belonging, intimacy and security. Every territory, according to the author, is permeated by power disputes, it is not given and only makes sense from the use that is made of it, therefore, it can be undone or even denied to a certain person or group, if this happens they are considered deterritorialized. With the destruction of houses in the face of an event of intense rains, such as those presented in the previous speech, "there will be the deterritorialization of families by public agencies, and they will be called evicted or homeless⁵" (Marchezini, 2009, p. 53). The risks of these disasters, whether from landslides, floods or others, become even more worrying for people who live close to water sources such as rivers and dams, who are the ones who are

⁵ Displaced people are those who need to leave their homes temporarily or permanently and who do not need shelters offered by the State, since they can count on someone, be it friends and/or relatives. Homeless people, on the other hand, also experience the loss of their home, but, unlike the first category, they will need to settle in shelters since they have no one to turn to (Marchezini, 2009).

usually exposed to processes of vulnerability, as exemplified by the speech of participant 17OG:

[...]. It's just that we have a very needy neighborhood here, which presents a series of risks that would be at risk of collapse. Floodable areas. [...]. However, we have about 80 families who suffer, especially in the rainy season, where the risks of landslides, risk of flooding, and floods increase. (Participant 17OG - workshop).

The discourse of participant 17OG brings us the discussion about the experience of people in the so-called risk areas, that is, the neighborhood considered "needy" by her/e signals the susceptibility to the risks associated with the rains to which the people who live there are subjected. For Geraldi (2009), it is clear that vulnerability is directly linked to the way the territory is occupied, where the most impoverished classes are the ones who occupy these areas exposed to the most diverse types of disasters, and it is also linked to the specificities of life of each group. It should also be said that before a territory is considered a risk area, it exposes people's relationship with this space, their life trajectories, thus reassembling their "Place of living and living" (Vargas, 2016, p. 553). As a last point to be brought up, we have the losses faced by residents of rural areas. From what we can observe, not only does the lack of rain affect the livelihoods of this population, but also the excess of it. In this regard, participant 18OG comments:

[...], when it's very rainy it's also a drought, which we call a green drought. That it destroys everything, takes everything, practically nothing remains, nothing is ready for you to have an idea, now in 2022, the harvest of our municipality and the surrounding municipalities here in the region of our agreste todinho, was nothing, there was nothing the people planted but did not harvest.. Right? [inaudible] despite raining so much but no one harvested the beans that are our beans, mulatinho beans, pink beans, and others and others, right, even the string beans themselves, which were planted later, and there was a very big difficulty, he created one.. yes, here we call it rust because it is very similar to rust in the bage and it doesn't grow anymore and the pit gets very bad, got it? So even that affected, right? (Participant 18OG – interview)

What the interviewee calls green drought refers to abundant rainfall that is poorly distributed in terms of time and space, as Tavares, Arruda and Silva (2019) point out. Like drought, extreme rainfall affects agricultural crops, having a negative impact on work, economic conditions and also on the food of the people who survive from this activity. Therefore, for Koga (2009), although rains are seen as a blessing and something essential, when they happen abundantly, they can cause a lot of devastation for the affected communities.

STRATEGIES TO DEAL WITH DROUGHT AND EXTREME RAINFALL

As we have seen before, drought and extreme rainfall events negatively interfere with agricultural production, with repercussions on socioeconomic and environmental issues; water supply; public health, among other areas. To deal with such situations, it is necessary to plan and execute strategies that go through the three moments of disasters: before, during and after their appearance. In this bias, there are the stages that make up what we call the Disaster Management Cycle, encompassing actions aimed at: prevention, mitigation, preparation, response, and reconstruction. About the definition of each of them, we have already seen before in the methodological discussion of this work. In view of this, in order to understand and discuss what activities are being carried out in the municipalities of the Southern Agreste by the OGs and NGOs with regard to the phenomena of drought and heavy rains, we decided to divide this second block into three subgroups: Dealing with drought: techniques adopted by the OGs and NGOs of the Agreste; Extreme rainfall in the agreste region of Pernambuco: possible actions in the face of its effects; and The psychological impacts of disasters and the (non)place of psychology in the strategies adopted. Each of them will be presented below.

DEALING WITH DROUGHT: TECHNIQUES ADOPTED BY NGOS AND NGOS IN THE AGRESTE

In view of the difficulties generated by the drought, the strategies carried out by the people participating in their municipalities refer mostly to a question of water supply. In this sense, we have as the main activity reported by 17 of them, the use of water trucks, both municipal and from the Brazilian Army. In addition to the presence of this equipment, the following were also mentioned: 10 people brought the action of drilling and cleaning wells; 10 reported the construction and/or cleaning of barriers, dams, weirs and reservoirs; and 1 spoke about the recovery of springs. The construction of cisterns was also mentioned by 5 of them, however, such activity is mentioned as something carried out in the past, its constructions are not presented as current strategies.

Regarding the drilling of wells, during the workshop, one of the participants raised a concern about such activity, alleging that its disorderly constructions and without adequate treatment can harm the health of the population, as we can see below:

[...], the drilling of wells, the issue of saline/brackish water. I believe it is brackish. This is a future problem for the people who are making use of this water, right? Culturally,

these people will all become hypertensive, because everything passes through the skin, the body absorbs it as the amount of salt is very high, the density is very high. I believe it's not just salt. There is magnesium too. Other minerals and these families are at risk of their lives, aren't they? And the issue of the well itself, it is a problem because it is an action that is disorderly, the drilling of wells, disorderly here in the agreste region. It is a problem, because even in the rainy season, these drilled wells, even randomly without supervision, lower the water table. [...] As soon as it ends in the rainy season, the flow of the springs in the wells consequently decreases. This is an issue to be reviewed. Not only by the government, but by the whole society, so that if there was a strict inspection on top of this, this is a serious problem, which will have future consequences for our health, the population. (Participant 7NGO-workshop)

For Camurça *et al.* (2016), water trucks, the drilling and cleaning of wells, and the construction and/or cleaning of dams, dams, weirs, and reservoirs, are characterized as emergency actions that only minimize the lack of water for a short time, "do not immunize the population from risks, diseases, and injuries" (Alpino; Seine; Freitas, 2016, p. 817) and do not modify "the socioeconomic and political structure, [...] alleviate hunger without mitigating social vulnerability [...]" (p. 121). For Gnadlinger (2015), these measures are still carried out from a perspective of combating drought, seeing it as an "enemy to be exterminated". On the other hand, the recovery of springs, mentioned by the participant 7NGO, and the construction of cisterns, are presented as the only preventive activities according to Firmo and Ribeiro (2016), since they are presented as a possibility to ensure access to water on a permanent basis.

In addition to the recovery of springs, other activities to prevent environmental damage are exposed by the 7NGO, such as planting native trees of the Atlantic Forest, environmental education work through lectures with all audiences (children, young people and adults) and also the collection and proper disposal of used batteries, batteries and cell phones. For Camurça *et al.* (2016), in order to deal with drought, it is necessary to abandon the notion of fighting it and look for strategies to coexist with it. This coexistence is possible as long as there are public policies that emphasize the development of individual, collective and community potential, as well as sustainable practices that correspond to the needs of each place.

EXTREME RAINFALL IN THE AGRESTE REGION OF PERNAMBUCO: POSSIBLE ACTIONS IN THE FACE OF ITS EFFECTS

With regard to the actions carried out in the face of disasters linked to cases of extreme rainfall, two were identified: monitoring of the water level, whether from dams,

weirs or other sources, and the removal of people living in housing considered to be at risk, as we can see in the following statements: "A contingency plan was made, of the dam to be able to evacuate, to take the population out of that risk area, we already know how to take all the measures now" (Participant 11OG-interview).

[...]. And now, in 2022, we suffered the last flood and we warned the population in advance. A day or two before about what was happening. [...]. This last flood now in 2022, the loss of population was minimal. It's because they already knew in advance what was coming, 24 hours before. The city hall made transportation available, left everything ready from the moment the water began to invade the city. Practically nothing was lost. Some people who lost a wardrobe because they couldn't take it out. But, thank God, everything worked out, we had no fatalities. The material was minimal. And we continue to monitor it. (Participant 7NGO-workshop)

[...] Our goal is to remedy, as soon as possible, when these disasters happen where the population is isolated, without access, is [inaudible], so together with the competent secretariats we request resources as soon as possible, for the recovery of roads, for the removal of those people who are at risk... Then we got in touch with the municipality's social assistance department, through [inaudible] social projects and programs, we take those families who are in a vulnerable situation, with imminent risk there, we put them at home, everything paid for by the public, until that moment... And we always assess whether there is still that risk, because when we say that there is a permanent, [inaudible] risk to the family in that place, we look for other means to remove this population. (Participant 6OG-interview)

According to Londe *et al.* (2014), here in Brazil there are organizations that carry out hydrological monitoring, such as ANA – National Water Agency, CPRM – Brazilian Geological Service and Cemaden – National Center for Monitoring and Alerts of Natural Disasters. Some municipalities also have their own system for monitoring. Based on this monitoring and also on the weather forecast, it is possible to establish states of alert in order to allow the authorities, such as the civil defense and also members of NGOs, such as the participant 7NGO itself, to reach the risk places "in time to carry out the preventive evacuation of residents and refer them, by safe routes, to previously established places of refuge, where they can be sheltered until the situation normalizes" (Carvalho; Galvão, 2016).

This preparation of the public authorities and the community for the situation of a disaster consists of what we call a contingency plan, as mentioned by the 11OG collaborator. In addition to these monitorings, other prevention works were also mentioned, such as: visits to other municipalities that were experiencing cases of floods and floods, mentioned by 11OG as a way to acquire knowledge of how to act if this happened in their city; and visits to residents within the municipality itself, mentioned by participant 12OG, in order to guide them about the reservoirs and barriers present in their localities.

Regarding the removal of people from places considered to be at risk, generally understood and mentioned by the participants as houses built irregularly, close to slopes, hills, bridges and rivers, it was an action carried out a lot, especially in the year 2022, a period already commented here previously. The removal of these people happened both due to the risk of their houses collapsing, and also after this had already happened. The participants reported the opening of temporary shelters, the rental of houses and the availability of a social rent amount. One of the participants also reported that she and her team are currently seeking federal and state resources to improve the housing in which some people are or even remove them permanently from the construction and delivery of new houses.

Regarding the removal of people from their homes, three participants also reported the resistance that some presented, as we can see in the excerpt:

[...] There were those who had a very strong resistance that we only managed to get them out of these risk zones, after a meeting with the prosecutor after insistence, we visited these families, it was that the secretary made contact with the prosecutor and the prosecutor talked to them, yes.. He even threatened to take it off.. the custody of the children that I think was another scare that she wanted to give, right, to be able these families to leave these residences only when they felt this risk this pressure from the prosecutor, yes.. it was that, we even participated [...], it's from this hearing I think [inaudible] audience, yes.. and the families only gave in to leave the properties after this meeting [...]. (Participant 21OG-workshop)

Through the discourse of 21OG we note the power relationship that is established between the so-called *experts* and the population, in which the latter, seen as resistant and even negligent for not leaving their homes considered to be at risk, are coerced to do so. Called a "scare" by 21OG, what we actually see is the imposition of fear generated in people. Through the threat of no longer being able to see their children, they are forced to leave their homes. The way found to make these people leave their homes is not seen as a problem, and the power relationship that is constituted between specialists and the population does not become an agenda for reflection and studies, it becomes easier, therefore, to use coercion than to seek other possible strategies.

For Valencio (2009b), the removals of residents from their homes are characterized as hygienist measures, in which there is an involuntary displacement of these people disregarding their ties with their home, relationships and habits, that is, "abruptly decoupling people from their things and their environment" (p. 34). In addition, according to Silva and Menezes (2020), there is a prevailing logic in the discourses and materials

produced by specialists that populations do not understand the risks to which they are exposed, a logic that needs to be analyzed more carefully. This is because, according to Vargas (2009), when the life situation of these people is carefully investigated, they can present a daily life permeated by various deprivations, sacrifices and different violations of rights. Thus, survival becomes urgent and immediate, and "subjection to a possible risk, to the notion of a future threat, becomes a secondary fact" (p. 84). This attention that people give to certain risks to the detriment of others is pointed out by the author as a process of hierarchization of risks, which is part of a sociocultural process.

Still on the discussion of evictions, Valencio (2009b) exposes that temporary shelters are considered means of rehabilitation for people when they lose their homes, instead of conveying a sense of welcome, shelters evidence a relationship of subjugation of people to a process of stigmatization. In relation to rent assistance, as much as it provides a private territory, this happens without the guarantee that movable and intangible assets will be replaced. In this sense, both shelters and social rent become factors of "destructuring of family life and social identity of their members" (Valencio 2009a, p. 30).

Finally, it is noteworthy that both in the actions presented to deal with rainfall and droughts presented in the previous topic, we observed that there are no tools for social control, that is, there is no inclusion of the population in the formulation of "management, inspection and monitoring" of the actions carried out (Firmo; Ribeiro, 2016, p. 3). Furthermore, we also identified the absence of professionals from the human and social sciences in the teams of the OGs and NGOs studied, among which the psychologists stand out here. The reflections, studies and strategies promoted by these workers could contribute a lot to the researched scenario, as we will discuss in the following topic.

THE PSYCHOLOGICAL IMPACTS OF DISASTERS AND THE (NON)PLACE OF PSYCHOLOGY IN THE STRATEGIES ADOPTED

In view of all the socioeconomic, environmental and physical health losses, linked to drought and heavy rains, as already pointed out in this study, there are also records of impacts on mental health. According to Grigoletto *et al.* (2016), the drought situation can generate cases of stress, anxiety, depression, suicides, and even behavioral changes such as aggressiveness. Freitas and Ximenes (2012), through a literature review, also point out impacts on mental health generated by extreme rainfall, specifically with regard to floods. According to data collected by the authors, states of **post-traumatic** stress, adjustment

disorder, insomnia, nightmares and repeated memories about the event, amnesia, irritability, anxiety, depression, suicide, and other types of disorders, were presented as a consequence of the aforementioned situations, directly affecting some groups, especially the impoverished, such as women, residents of rural areas, illiterate people, people with some type of disability, children and the elderly.

Based on the above, the role that Psychology can play as a social actor in coping with disasters is highlighted, specifically with regard to the human suffering generated by them and the search for ways to mitigate it. In the organizations that were part of this research, there is no presence of psychologists in the team, much less their collaboration in the strategies adopted to deal with the disasters studied in this work. Regarding Civil Defense, for example, a factor that can influence this situation is the issue that it has been a "space historically constituted by a restricted group of professional areas" (Federal Council of Psychology, 2011, p. 20). In addition, in a survey carried out with five psychologists working in the area of emergencies and disasters, B. Silva, I. Silva and Barufi (2023), point out that one of the difficulties in relation to the work of these professionals consisted of the disregard of specialists from other areas, who saw psychology as unnecessary. As we have seen previously in the introduction of this work, the insertion of Psychology in the area of emergencies and disasters is still recent, its consolidation has been taking place gradually. Even so, its contributions have increasingly proven to be indispensable, since it presents a range of possibilities for action, whether in collaboration with Civil Defense or NGOs.

It is important to highlight that Psychology can be present before the disaster, with actions aimed at prevention and preparation, such as: identification and analysis of risks, definition of more appropriate strategies to support the population affected by disasters, participation in the preparation of contingency plans and training, provision of training, etc.; during the disaster, with activities focused on response, such as: welcoming affected people, being available to provide the necessary guidance to the affected communities, giving attention and support to the rescue teams, among others; and it can also act after the disaster, with reconstruction actions: providing guidance on the reestablishment or creation of social support networks, carrying out psychological interventions, whether individual and/or group, managing "family and neighborhood bonds as a strategy for reconstituting the organization of life", as well as other actions (Federal Council of Psychology, 2011, p. 27). Despite its undeniable contributions, according to Souza (2012),

for Psychology in emergencies and disasters to be an area that continues to evolve, it is necessary to invest in scientific research, to intensify the interface of psychology with Civil Defense and NGOs, to train psychologists and to include the theme in training and professional improvement.

FINAL CONSIDERATIONS

From the present study, it was possible to conclude that although droughts and extreme rainfall are natural phenomena, the implications they cause in the social, economic, environmental and political spheres can never be naturalized, after all, we start from the assumption that disasters are a social construction, they represent an expression of the vulnerability in which people are inserted. Still, such a perspective is not what we see in practice, it is the opposite of it. Through our research with representatives of OGs and NGOs, it became clear that despite the negative repercussions of droughts and heavy rains, the strategies used to deal with them are based on emergency, mitigating, punctual and palliative actions. With the exception of one NGO, none of the initiatives present preventive actions, a situation that is not only characteristic of the region surveyed, but of Brazil as a whole, given that in the country there is no or deficient culture related to prevention and civil protection related to disasters. In addition, we still have a small socialization of information on the subject and the lack of technical preparation on the part of professionals working in the area, as Valencio 2009a brings us.

In addition, there is no involvement of communities in the reflection, execution and monitoring of the strategies presented, popular knowledge is disregarded, as well as often the territories, conditions and trajectories of life, making it difficult to reduce socio-environmental *vulnerability*. This situation demonstrates the importance of professionals from the human and social sciences being incorporated into the researched institutions. We highlight here the non-place of Psychology in the spaces investigated, there is no presence of psychologists in organizations, much less their contributions in the activities implemented. The municipalities of the participating people are small, located in the interior of Pernambuco, and through their speeches we see the impacts that droughts and extreme rains cause, and can even affect the mental health of their populations as we have already discussed here. With this, we believe that Psychology has a lot to add with regard to the theme of disasters, especially when we think about the agreste of Pernambuco.

REFERENCES

1. ALPINO, T. A., SENA, A. R. M., & FREITAS, C. M. (2016). Desastres relacionados à seca e saúde coletiva – uma revisão da literatura científica. *Ciência & Saúde Coletiva*, 21(3), 809–820.
2. ANDRADA, E. K. P., et al. (2018). Periodicidades na distribuição homogênea da precipitação no Agreste de Pernambuco. *Journal of Environmental Analysis and Progress*, 3(1), 100–117.
3. ARAÚJO, S. C., et al. (2015). Análise das formas de acesso à água na zona rural de municípios do semiárido paraibano. *Anais II WIASB.... Campina Grande: Realize Editora*. Disponível em: <https://editorarealize.com.br/artigo/visualizar/17171>. Acesso em 26 out. 2023.
4. ASSUMPÇÃO, R. F., et al. (2017). Possíveis contribuições da integração das políticas públicas brasileiras à redução de desastres. *Saúde Debate*, 41(Especial), 39–49.
5. BATISTA, E. C., MATOS, L. A., & NASCIMENTO, A. B. (2017). A entrevista como técnica de investigação na pesquisa qualitativa. *Revista Interdisciplinar Científica Aplicada*, 11(3), 23–38.
6. BECK, U. (2010). *Sociedade de risco: rumo a uma outra modernidade* (S. Nascimento, Trad.). São Paulo: Ed. 34.
7. BRASIL. Ministério da Integração Nacional, Secretaria Nacional de Defesa Civil. (2002). *Glossário de defesa civil: estudos de riscos e medicina de desastres* (3ª ed.).
8. BRASIL. Ministério da Integração Nacional, Secretaria Nacional de Defesa Civil, Universidade Federal de Santa Catarina, Centro Universitário de Estudos e Pesquisas sobre Desastres. (2010). *Gestão de riscos e de desastres: contribuições da psicologia*. Florianópolis: CEPED.
9. BRASIL. Ministério da Integração Nacional, Secretaria Nacional de Proteção e Defesa Civil, Departamento de Prevenção e Preparação. (2017). *Módulo de formação: noções básicas em proteção e defesa civil e em gestão de riscos: livro base*. Brasília, p. 1–49.
10. CAMURÇA, C. E. S., et al. (2016). Implicações psicossociais da seca na vida dos moradores de um município da zona rural do nordeste do Brasil. *Avances en Psicología Latinoamericana*, 34, 117–128.
11. CARTAXO, S. A., & SHIOTA, R. R. (2020). Três concepções acerca dos desastres. *CSONline – Revista Eletrônica de Ciências Sociais*, 32, 296–315.
12. CARVALHO, C. S., & GALVÃO, T. (2016). Prevenção de riscos de deslizamentos em encostas em áreas urbanas. Disponível em: <https://repositorio.ipea.gov.br/bitstream/11058/9613/1/Preven%C3%A7%C3%A3o%20de%20riscos.pdf>. Acesso em: 13 nov. 2023.

13. CAVALCANTI, G. R. C. (2019). O papel das ONGs ambientalistas na comunicação das mudanças climáticas: um caminho para o engajamento? (Dissertação de Mestrado). Universidade Federal do Rio Grande do Norte, Centro de Ciências Humanas, Letras e Artes, Programa de Pós-graduação em Psicologia, Natal.
14. CONFEDERAÇÃO NACIONAL DE MUNICÍPIOS. (2023). Danos e prejuízos causados por desastres no Brasil entre 2013 a 2023. Disponível em: <https://www.cnm.org.br/biblioteca/exibe/15604%22>. Acesso em: 05 jun. 2023.
15. CONSELHO FEDERAL DE PSICOLOGIA. (2021). Referências técnicas para atuação de psicólogas (os) na gestão integral de riscos, emergências e desastres (1ª ed.). Brasília.
16. CONSELHO FEDERAL DE PSICOLOGIA. (2011). Textos geradores – II Seminário Nacional de Psicologia em Emergências e Desastres. Brasília: CFP.
17. FAVERO, E. (2006). A seca na vida das famílias rurais de Frederico Westphalen – RS (Dissertação de Mestrado em Extensão Rural). Universidade Federal de Santa Maria (UFSM, RS), Santa Maria.
18. FIRMO, E. S., & RIBEIRO, M. A. T. (2016). Interface da Psicologia nas ações de prevenção e controle social nos municípios do semiárido de Alagoas. In Congresso Internacional da Diversidade do Semiárido, 1., Anais I CONIDIS, Campina Grande: Editora Realize.
19. FREITAS, C. M., et al. (2012). Vulnerabilidade socioambiental, redução de riscos de desastres e construção da resiliência – lições do terremoto no Haiti e das chuvas fortes na Região Serrana, Brasil. *Ciência e Saúde Coletiva*, 17(6), 1577–1586.
20. FREITAS, C. M., & XIMENES, E. F. (2012). Enchentes e saúde pública – uma questão na literatura científica recente das causas, consequências e respostas para prevenção e mitigação. *Ciência & Saúde Coletiva*, 17(6), 1601–1615.
21. FURTADO, J., et al. (2013). Capacitação básica em Defesa Civil. Universidade Federal de Santa Catarina, Centro Universitário de Pesquisa e Estudos sobre Desastres. 4ª edição, Florianópolis: CAD UFSC.
22. GERALDI, D. (2009). Pessoas com deficiência visual: do estigma às limitações da vida cotidiana em circunstâncias de riscos e de desastres relacionados às chuvas. In Valencio, N. et al. (Ed.), *Sociologia dos desastres – construção, interfaces e perspectivas no Brasil* (pp. 107–118). São Carlos: RiMa Editora.
23. GNADLINGER, J. (2015). Água de chuva no manejo integrado dos recursos hídricos em localidades semiáridas: Aspectos históricos, biofísicos, técnicos, econômicos e sociopolíticos. In *Captação, manejo e uso de água de chuva*. Campina Grande, PB: INSA.
24. GONÇALVES, J. C., MARCHEZINI, V., & VALENCIO, N. (2009). Colapso de barragens: aspectos sócio-políticos da ineficiência da gestão dos desastres no Brasil. In N.

Valencio et al. (Eds.), *Sociologia dos desastres – construção, interfaces e perspectivas no Brasil* (pp. 160–175). São Carlos: RiMa Editora.

25. GRIGOLETTO, J. C., et al. (2016). Gestão das ações do setor saúde em situações de seca e estiagem. *Ciência & Saúde Coletiva*, 21(3), 709–718.
26. INSTITUTO BRASILEIRO DE GEOGRAFIA E ESTATÍSTICA (IBGE). (2024). Pesquisa Nacional por Amostra de Domicílios Contínua: segurança alimentar. Coordenação de Pesquisas por Amostra de Domicílios. Rio de Janeiro.
27. INSTITUTO BRASILEIRO DE GEOGRAFIA E ESTATÍSTICA (IBGE). (2020). Síntese de indicadores sociais: uma análise das condições de vida da população brasileira. Coordenação de População e Indicadores Sociais. Rio de Janeiro.
28. JOAQUIM, F. F., & CAMARGO, M. R. R. M. (2020). Revisão bibliográfica: oficinas. *Educação em Revista*, 36, 1–22. Belo Horizonte.
29. KOGA, D. R. C. (2009). O impacto dos fenômenos climáticos sobre a organização e dinâmica sócio-produtiva num assentamento rural: estudo de caso dos efeitos das chuvas no assentamento “Bela Vista do Chibarro”, em Araraquara/SP. In N. Valencio et al. (Eds.), *Sociologia dos desastres – construção, interfaces e perspectivas no Brasil* (pp. 119–130). São Carlos: RiMa Editora.
30. LONDE, L. R., et al. (2014). Desastres relacionados à água no Brasil: Perspectivas e recomendações. *Ambiente & Sociedade*, 17(4), 133–152.
31. LONDE, L. R., SORIANO, E., & COUTINHO, M. P. (2015). Capacidades das instituições municipais de Proteção e Defesa Civil no Brasil: desafios e perspectivas. *Revista do Departamento de Geografia – USP*, 30, 77–95.
32. MACÊDO, L. N., & SOUZA, E. G. (2020). Panorama da Psicologia Discursiva no Brasil em Dissertações e Teses no Período de 2010 a 2020. *Braz. J. of Develop.*, 6(10), 79123–79137. Curitiba.
33. MARCHEZINI, V. (2009). Dos desastres da natureza à natureza dos desastres. In N. Valencio et al. (Eds.), *Sociologia dos desastres – construção, interfaces e perspectivas no Brasil* (pp. 48–57). São Carlos: RiMa Editora.
34. MATTEDI, M. (2017). Dilemas e perspectivas da abordagem sociológica dos desastres naturais. *Tempo Social*, 29(3), 261–285.
35. POTTER, J., et al. (1990). Discourse: Noun, verb or social practice? *Philosophical Psychology*, 3(2-3), 205–217.
36. QUARANTELLI, E. L. (2015). Uma agenda de pesquisa do século 21 em ciências sociais para os desastres: questões teóricas, metodológicas e empíricas, e suas implementações no campo profissional. Tradução: Raquel Brigatte. *O Social em Questão*, 18(33).

37. SCHMITZ, R. L., & SOUZA, R. L. B. (2022). As contribuições da Psicologia em situações de emergências e desastres. *Revista Psicologia em Foco*, 14(20), 2–24. Frederico Westphalen.
38. SILVA, B. G. A., SILVA, I. R., & BARUFI, L. F. (2023). O papel do psicólogo frente a situações de desastres. *Revista de Psicologia: Diversidade e Saúde*, 12, 1–17. Salvador.
39. SILVA, J. C. B. (2017). Muito além da questão ambiental: discursos sobre as gestões dos riscos no contexto das emergências e desastres (Tese de Doutorado). Programa de Pós-Graduação em Psicologia da Universidade Federal de Pernambuco, Recife.
40. SILVA, J. C. B., & MENEZES, J. A. (2020). Discursos (Sobre)Viver nos Territórios em Risco da Região Metropolitana do Recife. *Psicologia: Ciência e Profissão*, 40, 1–17.
41. SOUSA, F. A. S., et al. (2016). Estimativas dos riscos de chuvas extremas nas capitais do Nordeste do Brasil. *Revista Brasileira de Geografia Física*, 9(2), 430–439.
42. SOUZA, N. L. F. (2012). A atuação da Psicologia em desastres e emergências: uma visão estratégica. *Revista da Escola Superior de Guerra*, 27(55), 81–93.
43. SOUZA, W. M. (2011). Impactos socioeconômicos e ambientais dos desastres associados às chuvas na cidade do Recife-PE (Tese de Doutorado em Recursos Naturais). Universidade Federal de Campina Grande, Centro de Tecnologia e Recursos Naturais, Campina Grande-PB.
44. TAVARES, V. C., ARRUDA, I. R. P., & SILVA, D. G. (2019). Desertificação, mudanças climáticas e secas no semiárido brasileiro: uma revisão bibliográfica. *Geosul*, 34(70), 385–405. Florianópolis.
45. TRINDADE, M. C., & SERPA, M. G. (2013). O papel dos psicólogos em situações de emergências e desastres. *Estudos e Pesquisas em Psicologia*, 13(1), 279–297. Rio de Janeiro.
46. VALENCIO, N. (2009). Da “área de risco” ao abrigo temporário: uma análise dos conflitos subjacentes a uma territorialidade precária. In N. Valencio et al. (Eds.), *Sociologia dos desastres – construção, interfaces e perspectivas no Brasil* (pp. 34–47). São Carlos: RiMa Editora.
47. VALENCIO, N. (2009). O Sistema Nacional de Defesa Civil (SINDEC) diante das mudanças climáticas: desafios e limitações da estrutura e dinâmica institucional. In N. Valencio et al. (Eds.), *Sociologia dos desastres – construção, interfaces e perspectivas no Brasil* (pp. 19–33). São Carlos: RiMa Editora.
48. VARGAS, D. (2009). “Eu fui embora de lá, mas não fui” – a construção social da moradia de risco. In N. Valencio et al. (Eds.), *Sociologia dos desastres – construção, interfaces e perspectivas no Brasil* (pp. 80–95). São Carlos: RiMa Editora.

49. VARGAS, M. A. R. (2016). Moradia e pertencimento: a defesa do lugar de viver e morar por grupos sociais em processo de vulnerabilização. Cadernos Metrópole, 18(36), 535–557. São Paulo.