

# Psychosocial and Mental Health Impact of Landslide in Mokokchung Town, Nagaland

Supongsenla Jamir

Department of Social Work Jamia Millia Islamia University New Delhi

E-mail: supongsenla.jamir@gmail.com

**Abstract**—Nagaland is subject to all kinds of natural disasters like Earthquake, Landslide, Forest Fire, Flash Floods etc. Due to the hilly terrain, landslides are very frequent in the state and the people suffer huge losses. This paper aims to present the current scenario in Mokokchung town of how landslide disaster has an impact on the mental health of people who are directly affected. The paper is limited to the analysis of the issues during the disaster caused largely by the landslides in Mokokchung district of Nagaland. The respondents are those directly affected by landslide. The main objectives are: (i) how the landslides have impacted the psychosocial and mental health of people residing in the prone regions, (ii) services available from the government for the affected communities in times of disaster, (iii) to identify the gaps in support services. The data is based on 60 respondents and support by 4 in-depth case study of the residents who are directly impacted by the landslides in Mokokchung town. As a result of the study, it was found that the affected communities do not get any kind of counseling, post-trauma care and rehabilitation facilities from the government or NGOs.

**Keywords:** Landslide, Mental Health, Trauma, Urbanization.

## 1. INTRODUCTION

Natural Disaster has become a major concern globally. In recent years, the impacts of natural disasters are increasing in terms of occurrence, complexity, scope and destructive capacity. Disaster arises when individuals are unable to adapt with the hazards. Disasters are affected people in varied ways, socially, physically, economically and mentally.

In the recent years, the Landslides have become an increasingly common catastrophe in Nagaland. This is due to various factors like the terrain, deforestation, soil erosion, unplanned land use, urbanization, and human settlement in sensitive regions which has resulted in disastrous events quite frequently. People residing in or near the hilly region and mountainous area are exposed to the natural hazards. Most part of the Mokokchung town is laying face down to landslides because of the hilly and sloped terrain. Every year many people migrated to the urban neighborhoods in search of stable livelihood or for the better education of their children and sometimes because of their occupation profile. Most of the people are not fortunate to reside in the safe places and this

leads to unplanned and congested human settlements in disaster-prone regions.

Rapid expansions are taking place in the hilly landscapes without a suitable planning which has become a major contributor to landslides. Sometimes these expansions for the betterment of the inhabitants become life threatening. Human greed is endless and keeps on destroying the surroundings in the name of development. These days coal mining is very common along the National Highway (NH-39, Mokokchung) without following correct procedures. The carelessness is evident when we travel pass through this stretch. Along this highway, many places were dug for coal and the site of excavation is common. The people involved in these activities do not really follow the correct mining methods, resulting in subsidence, such as weakening of soil, slope instability etc. These factors often result in blocking, damaging and even washing away of the roads. These further create hindrance to the supply of goods, public transportation and even loss of life in the surrounding regions. Human activities such as deforestation, unplanned roads and urbanization results in soil erosion, damage to the environment and causing greater losses to the inhabitants in the nearby vicinity.

The factors which influence whether a landslide will occur typically include, slope angle, climate, water content, vegetation, slope stability, mining activities, over population among others. These factors are broadly categorized as natural and human causes. Nagaland is a tribal state, many people in the rural areas practice traditional Jhum cultivation (shifting cultivation), which involves the process of growing crops by first clearing the land of trees and vegetation and burning them thereafter. The burnt soil contains potash which increases the nutrient content of the soil. But this same process causes rapid soil erosion due to deforestation which in turn becomes extremely harmful for the environment. This trend is very common till date in many villages. Even the people residing in the urban areas practice Jhum cultivation as their alternative source of income near the surrounding forest. The government needs to find an alternative way of farming such as horticulture crops to protect the environment while boosting the rural economy. Among other steps, assessment of environmental and man-made disaster contributing factors by

various NGOs, CBOs and other governmental bodies should be undertaken on a regular basis. Conducting public awareness campaigns on identifying the signs of landslides, how to cope with the disaster, relocating to safer places and alternative farming methods.

The reports from the Newspapers and residents, the landslides are quite frequent in the hilly district of Mokokchung town. During the heavy rains, residents prefer to stay inside their houses with fear especially those residing in the prone areas. The landslides have become a hindrance to human development in the small towns. On 26<sup>th</sup> May 2005, there was an incident of the landslide in various parts of Mokokchung town, in which 18 people were killed and many were injured. The mudslide was occurred due to excessive rainfall. The trauma and impact of a disaster can be both short and long-term depending on the severity and losses. The people who lose houses, land, and farms recover soon as compared to those families who lose their loved ones. Every year disaster brings physical and mental trauma for the people and also causes severe losses to the residents and governmental bodies in relief activities.

In this scenario, the government and NGOs can play a very important role helping the affected communities by providing counseling, rehabilitation, post-trauma care, organizing activities to help them come out of the trauma. Post disaster relief activities are not only about providing relief, financial support but also helping the affected victims to cope with the situation and bring them back to normal life. The government, NGOs and CBOs should organize awareness and training programs for the local communities and classify the sensitive regions. Sanitizes them about the landslide and what they can do in times of landslide occurrence.

Landslides have contributed severe environmental degradation and regional vulnerability in rural as well as urban areas of Nagaland. Many residents underestimate the problems of landslide and its severity. In order to reduce the impact, all sectors should come together like the government, NGOs, CBOs and civil society for proper implementation and making various policies successful.

## 2. LITERATURE REVIEW

Landslide poses a great threat on the life of the people in Mokokchung region both economically and physically. Many residents live in fear during monsoon or excessive rainfall. There has been a sharp increase in the frequency of landslide in the district because of many factors like increase of population, urbanization and people migrating from villages and settling in potential hazard areas and destruction of nature and environment in the name of development which often caused environment degradation. These all factors have influenced countless landslides. Drastic climate changes in the recent years are proven evident in the state. There is an irregular increase in temperature and excessive rainfall which result in an extensive landslide [6].

Disaster is a complex multi-dimensional phenomenon having a short-term impact on the individuals socially, economically, psychologically and politically depending on the severity of the disaster [5, 9]. There is sufficient research evidence at national and international level concerning the mental health and psychosocial consequences of disasters. It has been highlighted that expression of the affected communities like stress and emotional reactions is 'normal response to an abnormal situation' and are able to somehow adapt with little psychosocial support from experts [5, 10].

Timely support for affected victims is extremely necessary because of lack of proper and sufficient support, survivors go through emotional distress and decline in social functioning, and here the importance of psycho-social and mental health services is required. The psycho-social response/ reactions impacts are directly related to the trauma and the severity of the disaster they experience [5]. It is important to assess the impact of a disaster on the community for three reasons. First, collecting information is important for community leaders after an adversity as it will determine the assistance needs from external sources. Secondly, to identify the specific segments of the community that have been affected by the disaster and lastly, planners can develop potential projection and make the adjustments on alternative hazards through it is a very complex process. [3]

The impacts of a landslide on an individual can extend to aspects like social, economical, political and psychosocial and all these factors are inter-linked and contribute to mental health. It is difficult to measure social impacts, it is nonetheless important to evaluate them because it can cause considerable problems for the long-term functioning of specific types of households and business in an affected community [1, 12]. The greater the trauma, the more severe is the psychological distress and social disability. Emotional reaction like fear, guilt, shock, grief, numbness and hyper tension are universal response for unforeseen disastrous events [2, 12].

## 3. METHODOLOGY

The present study aims to examine how the landslide is affecting the psychosocial and mental health of the residents in Mokokchung district from 9 different ward/ colonies. The study is done by using mixed method approach with both quantitative and qualitative approach. The study adopts a 'descriptive' research design which includes a semi-structured questionnaire, in-depth interview schedule and a case study approach designed for the affected communities. It is in alignment with the research objectives and appropriate study will be drawn based on the results. The data is collected from 60 respondents and supported by 4 in-depth case studies. The information on this paper is based on data collected from the PhD research work.

#### 4. FINDINGS

The majority of the respondents with 72.7% are still living in the same houses even after frequent landslide experiences and remaining 27.3% have migrated to safer neighbourhoods. It was found that people living in rented accommodations have the options of moving into new homes than those living in their own house as per the findings. The respondents with 42.5% are working in the government organizations and 21.8% working in the private sector and other remaining respondents earn their livelihood through farming, daily wagers and selling vegetables in the market.

Most of the respondents are aware of the landslide and how it is obstructing their lives but many respondents continue to overlook the consequences and still live in the sensitive regions. The people working in the private sectors and other small vendors who migrated from nearby villages, can compromise living in places with very low rent. It was noticed that the houses near the sensitive areas were cheaper as compared to those safer place.

All the respondents agreed that they face financial losses every year because of the landslides and they have been exhausting their income for repairing the damages caused by the landslide like the house, drainage, building walls etc. Lives become more difficult for the day labourer because their livelihood depends on their daily earnings and whenever this type of disaster happens; the impact on them is high as compared to those people working in the government and private sector. 71.6% of the respondent's houses were damaged and the remaining 38.4% of them has damages like washing away of land, walls, and animals etc. People use various techniques to protect themselves from the landslides. Those who earn fairly well opt for building concrete walls near the drainage of the slope surrounding their houses and those who cannot afford to build concrete walls put tarpaulin in the surroundings during the monsoon. Though the people are living in the hazardous area, a majority of the respondents do not have any insurance coverage for their home or themselves. Only minimal with 4.6% of the residents have insurance coverage. Many people could not enroll for various insurance policies as they do not have much knowledge of the advantages about having insurance and secondly many people could not afford to maintain it financially.

81.8% of the respondents agreed that the landslide has impacted on their health both directly and indirectly. Some of the respondents were physically injured during the landslide and the unfortunate one has lost their love ones. Many people went through mental trauma and continue to live with fear and have sleepless nights especially during the monsoon time or if there is continuous rainfall. One of the respondents shared her agony about losing her 2 daughters and her mother on 26<sup>th</sup> May 2005 early in the morning buried under the debris of mud flow. Even her husband was trapped but with the help of neighbors, they pulled him out of the debris. The

neighborhood people tried to search for her daughters and mother but it was too late and they did not survive and she fell unconscious. When she came back to her consciousness, she was admitted in the hospital under heavy medication. She requested the medical staff to let her attend the last rites of her family but instead of listening to her request, they gave her high medication dose and eventually she could not attend the funeral service. Even today she lives in trauma and the incident still haunts her. Another respondent said that he came to Mokokchung town for a better education of his children, but lost both his sons during the landslide disaster and he lost everything in one night. Few neighbors helped them with cleaning and tried to pull out his sons but they could not since the mud flow was continuous. Another elderly couple has shared their grief and hopelessness they have gone through in the late 90's because of landslide. They had built a beautiful house from the retirement funds but the whole house was ruined under debris and later they had to move to a rented house. After the landslide her husband suffered a heart attack and followed by a mild stroke. Now the husband has hearing problems and could barely walk and even today they are living in an under-construction accommodation. She said only God knows when they would be able to complete their house because most of their funds go in medicine expenditure.

It was found out that none of the respondents receive any kind of counseling from the government agencies, NGOs, or from the medical department, not even for those who lost their loved ones. At the same time no rehabilitation facilities were provided to affected communities after the landslide incident. The affected families took shelter at their neighbors or at their relatives place. Life is not easy for those residing in the hazardous area. One of the respondents has highlighted that people sympathize with them during or after the disaster but gradually they forget everything and their misery become history. But for them, disaster is such that its impact will never heal their pain and sorrow they have gone through and tries to move on with their life.

#### 5. DISCUSSIONS

From the above findings and observation, this paper can summarize that the occupants who are living in the prone or sensitive areas are well aware of landslide hazards and its associated risk. Most of the respondents were living in their own houses and very fewer respondents were living as tenants. For some people the reason of not moving, it is associated with poverty and for others, emotional attachment with their homeland. At the same time, many of the respondents have accepted the landslides as a part of their life and live with it carelessly. Many people still believe that it is "Gods will" and no one can stop it. Knowledge or competency also plays an important role in people's understanding of this issue.

Another major reason for people migrating to the urban areas and residing in the prone regions is the result of 'push' and 'pull factor'. Many people in villages have fewer

opportunities for their growth and their employment is limited thus, they migrate to the urban areas in search of a better livelihood and opportunity. Unlike the rural area, in the urban areas, there are more scope and opportunities for people like better education, improved life with more opportunities to start up a business etc.

It was found that many respondents has anxiety, depression and to live in isolation. All this are symptoms Post-Traumatic Stress Disorder (PTSD). During the disaster, many people lose their home, property, farms, land degradation, losses in business etc all these contributes to the health of the victims.

It was found that the members of local church and student unions are playing an important role in supporting the victims in prayers, visiting their homes, giving moral support and helping them in every possible way.

This study based on the findings and analysis revealed that there is a huge gap between the guidelines given by National Disaster Management Authority (2009) on psychosocial support and Mental Health Service for affected communities and the ground scenario based on the specific area of research. We need to see whether these guidelines are actually implementing at the ground level or not. Because from the findings, it was found that none of the affected communities receive any kind of counseling from the government agencies, NGOs or from medical department and not even provided with any rehabilitation. These are the basic need for the victims after the disaster because they have gone through enough trauma and pain. Many respondents have said that they do not get water supply and compel to buy water from outside for basic use.

The government still gives more importance to post-disaster by providing relief, man power support and financial support rather than giving awareness and training to the communities. Only relief and financial support is not sufficient to deal with the losses. The government should encourage and involve more NGOs, CBOs and other agencies to work together and help the affected communities in every possible way. The NGOs can play the vital role of an association between the government and the affected communities.

## 6. ACKNOWLEDGEMENT

The author would like to thank all the respondents for the valuable cooperation.

## REFERENCES

- [1] Davidson, J. R. T., and McFarlane, A. C., "The extent and impact of mental health problems after disaster", *The Journal of Clinical Psychiatry*, 67, 2006, pp. 9–14.
- [2] Jogia, J., Kulatunga, U., Yates, G.P., and Wedawatta, G., "Culture and the Psychological Impacts of Natural Disasters: Implications for disaster management and Disaster Mental Health", *The Built & Human Environment Review*, Volume 7, 2014, pp. 1–10.
- [3] Lindell, M. K., and Prater, C. S., "Assessing Community Impacts of Natural Disasters", *Natural Hazards Review*, 4(4), 2003, pp. 176–185.
- [4] Murray, V., Caldin, H., Amlot, R., Stanke, C., Lock, S., Rowlatt, H., & Williams, R., "The Effects of Flooding on Mental Health", *Health Protection Agency Publications*, December 2011, pp. 1–132.
- [5] NDMA., "National Disaster Management Guidelines: Psycho-Social Support and Mental Health Services in Disasters", New Delhi, 2009.
- [6] NIDM Nagaland, 2010. NIDM Nagaland National Disaster Risk Reduction Portal, Retrieved from <http://nidm.gov.in/PDF/DP/NAGA.PDF>
- [7] Noji, E. K., and Toole, M. J., "The Historical Development of Public Health Responses to Disasters", *Disasters*, 21(4), 1997, pp.366–376. <https://doi.org/10.1111/1467-7717.00068>
- [8] Raich, M., Adler, C., Stühlinger, V., Lorenzoni, N., and Duschek, S., "Impacts of Disasters on Health System Performance, Security and Health Protection" Retrieved from [http://psycris.eu/media/Raich-et-al\\_Instanbul\\_2015.pdf](http://psycris.eu/media/Raich-et-al_Instanbul_2015.pdf)
- [9] Sapir, D. G., and Lechat, M. F., "Reducing The Impact of Natural Disasters: Why aren't We Better Prepared?", *Health Policy and Planning*, 1(2), 1986, pp.118–126. <https://doi.org/10.1093/heapol/1.2.118>
- [10] Satapathy, S., "Mental Health Impacts of Disasters in India: Ex-Ante and Ex-Post Analysis", *Economic and Welfare Impacts of Disasters in East Asia and Policy Responses*, December 2012, pp. 419–455.
- [11] Shoaf, K., and Rottman, S., "Public Health Impact of Disasters", *Australian Journal of Emergency*, 15(3), 2000, pp. 58–63. Retrieved from [http://www.preventionweb.net/files/2026\\_VL206801.pdf](http://www.preventionweb.net/files/2026_VL206801.pdf)
- [12] Young, B. H., Ford, J. D., Friedman, M. J., and Gusman, F. D., "Disaster Mental Health Services A Guidebook for Clinicians and Administrators", *Department of Veteran Affair*, 2008.