



Assessing the Impact of Nepal's 2015 Earthquake on Older People and Persons with Disabilities and How Gender and Ethnicity Factor into That Impact

STUDY REPORT

A Joint Initiative of HelpAge International, CBM International and NDRC Nepal

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The findings, interpretations, and conclusions expressed herein are of NDRC Nepal and do not necessarily reflect the view of HelpAge International and CBM International. For more information, please contact either at NDRC Nepal, CBM and HAI.

List of acronyms

DAO	District Administration Office
DDC	District Development Committee
DDRC	District Disaster Relief Committee
DPO	Disable People Organization
FGD	Focus Group Discussion
GoN	Government of Nepal
HI	Handicap International
HSC	Hopkins Symptoms Checklist
KII	Key Informant Interview
MoWCSW	Ministry of Women Children and Social Welfare
NFDN	National Federation of Disabled, Nepal
OP	Older People
OPA	Older People Associations
PDNA	Post Disaster Need Assessment
PSSS	Perceived Social Support Scale
PTSD	Post Traumatic Stress Disorder
PwD	Persons with Disabilities
VCHW	Village Community Health Worker
VDC	Village Development Committee

Executive summary

1. Study objectives, methods and approach: This study of the impact of the Nepal earthquake of 25 April, 2015, aims to understand the impact factors leading to the exclusion of older people and persons with disabilities from humanitarian action, barriers to their inclusion, and the extent to which their skills and knowledge were utilised to promote inclusive humanitarian action and, using this understanding, to formulate a set of recommendations for promoting inclusion. These recommendations will be used to sensitise the broader humanitarian community to the need for inclusive disaster risk management practices in future emergency responses which pay attention to factors such as gender, age, disability and ethnicity, and build upon the capacities of older people and persons with disabilities.

A cross-sectional survey of older people and both adult and older persons with disabilities in seven severely affected districts was conducted eight months after the April 2015 earthquake. The sample size for both the older people and the persons with disabilities was estimated using the 2011 census data published by Central Bureau of Statistics, Government of Nepal. Of the 1,515 total respondents in the study sites, 1,142 were older people and 373 were persons with disabilities (206 older people with disabilities and 167 adults with disabilities). The estimated margin of error was 2.5%.

Analysis of the results intended to identify the proportion of older people and persons with disabilities disposed to post-traumatic stress disorder (PTSD), or anxiety, or depression, as well as to know how they perceived the overall social support they received from family, friends, kin, and society. The prevalence of probable PTSD, anxiety, or depression and risk factors predisposing a respondent to develop these conditions were analysed using R-statistical software. The probable factors, both impact and protective, contributing to the traumatic situation were estimated by employing a 'multivariate logistic model'.

The Hopkins Symptoms Checklist-25 was used to screen the probable anxiety and depression disorders. The checklist consisted 25 items: 10 for anxiety and 15 for depression, with scores ranging from 1 (not at all) to 4 (extremely). The reference period for symptoms was the month before the survey was undertaken. A mean score above 1.75 was considered to predict a clinical diagnosis of anxiety and depression disorders across different cultures. The Perceived Social Support Scale was used to measure the level of social support experienced by earthquake survivors. It consisted 12 items with scores ranging from 1 (strongly disagree) to 7 (strongly agree).

Qualitative methodology applied both review of secondary data as well as analysis of primary data through participatory approaches, mostly covered impact factors, good practices, challenges, and cross cutting issues namely gender and ethnicity. A total of 14 focus group discussions and 56 key informant interviews were carried out to capture the qualitative impression.

2. Conclusions: This study provides an insight into the situation and needs of older people and persons with disabilities in the face of disasters like earthquake. It has specifically captured the impact factors and coping capacities of these groups and the extent of the humanitarian response in addressing their needs. It also assessed the impact of the earthquake across three variables: age, gender, and ethnicity. The study found that the needs of older people and persons with disabilities were inadequately addressed by the humanitarian response and that wealth as well as familial and social support played crucial roles in enabling older people and persons with disabilities to cope with the impact of the earthquake. Some humanitarian responders, including HelpAge International, Christian Blind Mission, and Handicap International played key roles in meeting the specific needs of older people and persons with disabilities, but in many

instances, these groups were forgotten: they were abandoned by their family members and overlooked by emergency relief operations. The physical challenges of older people and persons with disabilities, gaps in the flow of information, political influence, and erosion of social and family support resulted in the exclusion of these populations from accessing humanitarian aid. The food aid provided during the humanitarian response was not sensitive to age and did not meet the food needs of older people. Sufficient care was not taken to include disability-inclusive shelters and WASH infrastructures. The mainstream aid provided during the humanitarian response was often neither adequate nor relevant to older people and persons with disabilities. The psycho-social counselling and efforts to promote shelter reconstruction and livelihood recovery for older people and persons with disabilities are still the dire needs for them to live a life with dignity. Humanitarian responders should now focus on livelihood recovery among older people and persons with disabilities to help them pull through the impact of earthquake. Revival of social sectors such as health, education and livelihood and rebuilding physical infrastructures is necessary to support in livelihood recovery. Their right to live with dignity and meeting basic and specific needs should be honoured.

3. Recommendations: Based on the six key study questions, following recommendations are made herewith:

3.1 Impact of the earthquake on older people and persons with disabilities

a. Psycho-social counselling: This study found that older women experienced more trauma, anxiety and depression than older men and those women with disabilities were more impacted, again as measured by rates of trauma, anxiety and depression, than men with disabilities. Social stigma, fear and trauma as well as mental stress were prevalent among older women and women with disabilities. The study also found that older persons with disabilities were more severely impacted than adults with disabilities as measured by their scores on trauma, anxiety and depression scales. To reduce the impacts of stress, anxiety and depression and to minimize the fear of another earthquake, humanitarian agencies should provide specific psycho-social counselling and specialised mental health services, in particular targeting older women and women with disabilities.

b. Health services for older people and persons with disabilities: To reduce the health impacts on older people and persons with disabilities, the government and humanitarian agencies should organize outreach health camps in readily accessible locations. Despite the fact that it is the government policy to make available more than 20 essential medicines at health posts free of cost, older people and persons with disabilities do not often have access to this service. Government should facilitate that the relevant medicines are regularly available in the health post. Humanitarian agencies should educate people about this policy provision, especially as some older people said that they have been unable to buy their regular medicines since the earthquake.

c. Allowances and relief materials: The specific needs of older people and persons with disabilities are different from those of other adults in terms of care and support. Because they are more vulnerable than others, too, humanitarian agencies should establish a system for the equitable distribution of relief aid which specifically targets them. The relief aid should be age- and disable-inclusive and the focus should be more on cash than material support.

d. Livelihood recovery: About 95% of respondents reported that they had lost property, 50% that they had lost livestock and 3% that they had lost one or more family members. Humanitarian agencies should concentrate their efforts on restoring lost livelihoods and design inclusive support for recovery. The economic recovery plans for older people and persons with disabilities should be based on local resources, skills and experiences and be well- integrated into the overall recovery programs at the community

level. Humanitarian agencies should provide seed grants to OPAs and DPOs to run small-scale livelihood-based enterprises and they should be linked with the programs of Nepal's Poverty Alleviation Fund and with the Micro-enterprises Development Program wherever appropriate.

3.2 Roles of gender, age, disability and ethnicity in determining the impact of the disaster

a. Age- and disability-disaggregated data: Since the available data was neither up-to-date nor disaggregated based on age, gender, disability and ethnicity, it was difficult to identify people who needed relief. Humanitarian agencies should focus on collecting disaggregated data by developing common and agreed-upon templates and formats for data collection. Such templates, formats and database tools selected should be used at the ward, VDC and district levels so that data can be compiled and compared easily. Compiled data should also be kept at DDC information centre and made accessible to the users.

b. Physical accessibility: The study found that even though adequate relief was sent to earthquake-affected areas, poor physical accessibility undermined the ability of persons with disabilities to access it. Though the humanitarian agencies provided assistive devices; the condition of roads, public buildings and means of transport were mostly inaccessible to persons with disabilities, rendering them of limited use. Humanitarian agencies, therefore, should advocate for the construction of disabled-inclusive physical infrastructures. NFD-N and DPOs should take a lead role in promoting advocacy for adopting provisions for disabled-inclusive facilities in new physical infrastructures.

c. Social support: To reduce the exclusion of older people from their families and societies, agencies should help them form new OPAs and strengthen existing OPAs and allocate some cash and materials supports. In the future, humanitarian agencies should focus on distributing cash along with material support as it is money, not materials that are a crucial need among older people and person with disabilities. Cash support is particularly important provided that the market is accessible during emergencies.

d. Age-inclusive food aid: Humanitarian agencies generously provided food aid to the earthquake survivors whose stored grains were destroyed by their collapsed houses. Agencies should assess the real food needs of older people before providing such food aid. Instant noodles and beaten rice, for example, are not the good options for the older people because of their age-specific difficulties in chewing hard food.

e. Mainstream age, disability and inclusion-related issues in local development: To internalize age-, disability- and inclusion-related issues, governmental and humanitarian agencies should mainstream these issues in their administrative, human resource, and gender policies. The provisions should be made in such a way that the VDCs carry out age- and disability-mainstreaming audits along with minimal conditions and performance measures to ensure that age and disability issues are included in local development.

3.3 Coping capacities of older people and persons with disabilities during emergencies

a. Wealth: The study found that the wealthy people continued to make ends meet despite the losses they suffered due to the earthquake. Governmental and humanitarian agencies should design and implement economic recovery activities targeted to poor families of older people and persons with disabilities and link those activities with locally available micro-finance. Humanitarian agencies should also build linkages among Older People's Association (OPAs) and Disabled People's Organization (DPOs) in order to

promote resource- and idea-sharing. For persons with disabilities, the emphasis should be placed on the development of relevant skills as well as on input supports and market diversification, all measures that will help ensure the sustenance of income.

b. Family and neighbourhood: The study found that older people and persons with disabilities coped better when they had a good family support system, social assets, strong kinship networks, and political connections than when they did not. To increase solidarity and harmony among older people and persons with disabilities, OPAs and DPOs should be reformed and institutionalized and additional resource support should be provided from government and humanitarian agencies. To foster social ties, these institutions should be developed as social platforms for periodic review and reflection.

3.4 Factors preventing older people and persons with disabilities from accessing humanitarian aid

a. Geographical locations: To ensure that relief aid is accessible to older people and persons with disabilities, governmental and humanitarian agencies should establish points of distribution in previously unreached areas. The information of relief distribution should be well communicated, two to three days ahead of the date of actual relief material distribution in understandable and accessible formats so that older people and persons with disabilities can actually access the relief items and benefits from the aid. Governmental and humanitarian agencies should avoid the approach of 'first come first serve' and consider establishing separate queuing system and provisions for seating arrangements for older person and persons with disabilities who come to collect aid.

b. Information dissemination: Humanitarian agencies should fix the date, time and venue of the distribution of relief in advance and disseminate it through FM radio stations and local TV channels and also with the support of DDCs and VDCs, through the social mobilizers of CBOs and CSOs and ward-level citizen forums. Political parties, VDC officials, NGO workers, CBOs, and civil society organizations should coordinate with each other to disseminate information. The media should highlight the problems of older people and persons with disabilities in accessing the humanitarian aid in post-disaster situations.

c. Reliability of data: Both governmental and humanitarian agencies should expend time, energy, and resources on cross-checking and triangulating data before distributing relief materials. Agencies should diversify their communication methods to make sure that messages reach potential beneficiaries efficiently prior to the distribution of relief. Both male and female staff from humanitarian agencies should be mobilised to ensure gender equity in accessing aid, to prevent the possible alienation of women and to address any gender-based issues and complaints.

d. Political influence: Governmental and humanitarian agencies should organize interactions with political leaders and sensitize them about the spirit of humanitarian norms and values and share information about the specific issues and needs of older people and persons with disabilities in order to reduce political influence. Involve local political leaders in the collection, cross-checking and triangulation of the data gathered from various sources in order to increase their vigilance and to engage them actively in bridging gaps. The role of civil society organizations, too, is crucial, especially in minimizing the unfair influence politics has on distributing relief.

3.5 Degree that humanitarian actors address the needs of older people and persons with disabilities during disasters

a. Water, Sanitation and Hygiene: The disrupted WASH facilities by earthquake should be restored at the earliest so that people can have safe and wholesome water. To reduce the pain, drudgery and suffering of older women and women with disabilities,

age- and disability-inclusive WASH infrastructures need to be built and their distances from settlements minimized. To ensure the protection of women with disabilities, WASH facilities should be in accessible and safe areas as per the Sphere Standards.

b. Shelter and health: While designing transitional shelter support for one or two years before the construction of earthquake-resilient homes, humanitarian agencies should advocate for adopting accessible transitional shelter designs that take into consideration age and disability issues. Humanitarian agencies should advocate that all shelters be age- and disability-inclusive (ventilation, appropriate height, ramp and safety bar) and that they adhere to Sphere Standards. Shelter should provide their occupants with privacy and safety.

3.6 Institutional barriers to inclusion and the documentation of good practices

a. Strengthen the capacity of OPAs, DPOs and NFD-N: Agencies should work together to amend existing laws, policies, and strategies as required to reduce barriers of inclusion of older people and persons with disabilities. Governmental and humanitarian agencies should strengthen the capacity of OPAs, DPOs and NFD-N for mainstreaming age and disability into development. They should mobilize “age and disability task forces” to strengthen the mainstreaming agenda and promote the greater inclusion of target groups in DRR and future emergency responses.

b. Contextualize and implement guidelines for old-age and disability mainstreaming and inclusive development: Humanitarian agencies should support to contextualise and implement of the guidelines, tools and techniques for old-age and disability mainstreaming and inclusive development. They should be site and context-specific, short, and coherent and address the needs and gaps of older people and persons with disabilities.

c. Carry out advocacy for the inclusion of older people and persons with disabilities: Governmental and humanitarian agencies should advocate for mainstreaming age and disability into disaster preparedness efforts, particularly in the context of the government-initiated comprehensive disaster management program. Humanitarian agencies should advocate to work with governmental agencies at different levels to increase the inclusion of older people and persons with disabilities in disaster risk reduction and disaster response.

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Chapter 1: The context

1.1 Background

Older people and persons with disabilities are disproportionately affected by natural disasters. They often lose mobility and access to assistive devices and struggle for information access and humanitarian relief. Their difficulties are compounded by pre-existing cultural and social discrimination, which results into their being prevented from accessing support and resources.

In addition, older people and persons with disabilities are generally overlooked during emergency responses and the lack of humanitarian assistance increases their vulnerability. Mainstream humanitarian agencies generally believe that older people and persons with disabilities are looked after by specialized agencies, they often ignore them, further limiting their already poor access. Humanitarian agencies tend to overlook older people and persons with disabilities during their relief interventions due to inadequate experience, awareness and expertise¹.

Gender, age, disability, ethnicity, culture and poverty are among the many factors that affect a person's vulnerability to the effects of disaster. Older people and persons with disabilities are often very dependent on their families or community members to fulfil their basic needs, so they are vulnerable when a disaster destroys safety nets or breaks up social relationships. The intersection of age, disability, and gender serves to exacerbate their extant vulnerabilities. For instance, older women are more likely to be excluded from the effects of a disaster than older men because of the gender disparity associated with patriarchal family systems. Gender-based discrimination, overwhelming social responsibilities, social restrictions and discriminatory political systems intensify women's vulnerabilities and often limit the amount of social protection available to women during a humanitarian crisis.

Since older people and persons with disabilities are often seen as passive recipients of humanitarian aid, the contributions their knowledge, skills and experiences could make to disaster response and mitigation are overlooked. Unfortunately, it is such knowledge, skills and experiences that are vital to promoting the interests of older people and persons with disabilities and ensuring their inclusion. If their capacities are recognized, these groups can make a significant contribution in efforts such as risk assessments and operational response and recovery.

To support older people and persons with disabilities and ensure their inclusion in humanitarian programmes, various local, regional and global initiatives have been commissioned. HelpAge International (HAI) and the Christian Blind Mission (CBM) International are part of a global consortium -the age and disability consortium²- that promotes the inclusion of older people and persons with disabilities in humanitarian policies and programs. These organisations are now collaborating in Nepal to implement a joint inclusion, advocacy and community-based protection programme in the seven most earthquake-affected districts, namely Kathmandu, Kavre, Sindhupalchowk, Makwanpur, Bhaktapur, Nuwakot and Gorkha (figure 1).

¹See ACAPS/UNOCHA SITREP for the period from 25 April to 2 May <http://www.un.org/disabilities/default.asp?id=18>

²Kett, et al., 2005. *Practice, Process and Possibilities: Disaster and Public Shelter in Emergencies*.

The earthquake of 25 April, 2015, and its aftershocks affected over 600,000 older people. But the exact number of persons with disabilities that were affected by the earthquake is still unknown. Both gender and ethnicity played a role in determining who was worst affected.

Nepal's Senior Citizens Act (2063 B.S.) defines senior citizens are those who are 60 years old and above. WHO (n.d.) defines persons with disabilities as people who have impairments, whose activity is limited, and whose participation is restricted. Because Nepal has little evidence or data on the exclusion of older people and persons with disabilities, these most-at-risk groups are too often invisible during humanitarian responses and the policies governing them.

The Government of Nepal (GoN) provides various social protection allowances to older people, persons with disabilities and other highly vulnerable people, including an old-age allowance, disability allowance (categorized as groups 'A' and 'B'³), and a widow's allowance.

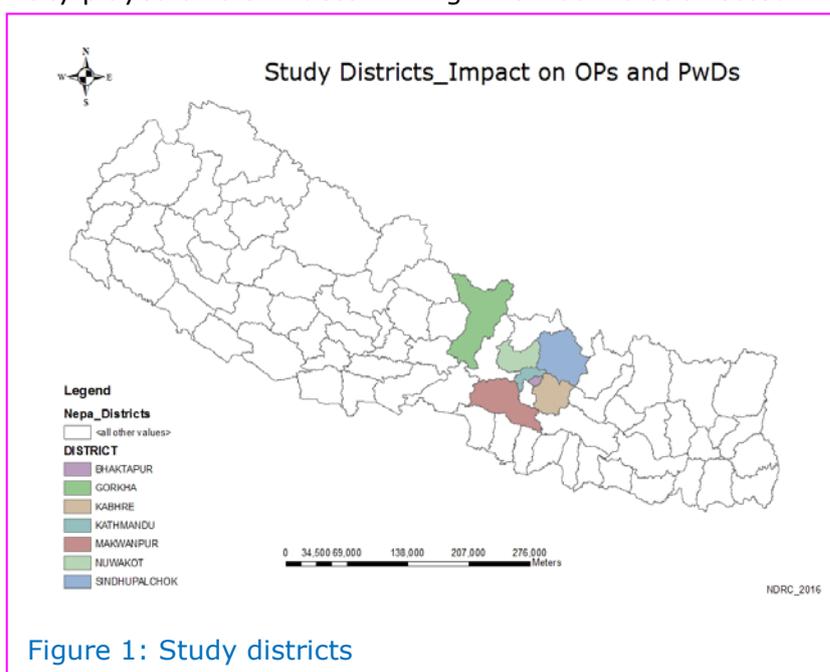


Figure 1: Study districts

In 2003, the GoN promulgated Social Security Programme Operation Procedures, a directive which spells out that 'there is a provision of providing allowance and pension to people 16 years old and above who are blind in both eyes, who have no hands or neither of whose hands can work, and who have no legs or neither of whose legs can work'. Since there is no comprehensive definition which includes all types of persons with disabilities, people who are deaf in both ears, people who have intellectual disability and people who have multiple disabilities have not been able to get social security allowances (MoWCSW, 2006). The persons with disabilities are entitled to receive an allowance once they are issued with an identity card by their VDC. Those who are completely disabled (red card holders) receive NPR 1,000 per month, while those who are partially disabled (blue card holders) receive NPR 300 per month (NFDN, 2013).

In 2008/09, the GoN also increased the old age allowance to NPR 500 per month and eligibility was extended; Dalits and people who live in the Karnali region who are over 60 years old are now able to claim the allowance, as are other Nepali citizens over the age of 70 years of age (SLRC, 2014). Government has again increased the old age allowance to NPR 1000 in 2015.

1.2 Study rationale

Nepal lacks much crucial information that could be used in responding to a disaster effectively. This includes, (i) a pre-disaster real-time database of older people and persons with disabilities, (ii) evidence of and data on the exclusion of older people and persons with disabilities, (iii) statistical data disaggregated by age, gender, disability, and ethnicity, and (iv) the risks faced by older people and persons with disabilities.

³A **Category A:** A person who's physical and mental systems are not fully functional and has to depend upon others to perform daily activities. This category includes people with intellectual disabilities, who are both deaf and blind, and whose mobility is restricted unless they are supported by another individual.

Category B: A person include people with multiple disabilities who can perform daily activities but need continuous support from other individuals for other activities and have challenges in learning. The disabilities involved include physical and mental paralysis, dysfunction of lower or upper limbs, communicating with the support of assistive devices, the blind, and the deaf.

The fact that profiles of older people and persons with disabilities are often inadequate and out-of-date makes it difficult to include them in the mainstream humanitarian response. Moreover, inadequate evidence of and data on exclusion of older people and persons with disabilities rendered these groups largely invisible. An accurate assessment of the numbers of people of different categories affected by the earthquake was not possible because statistical data disaggregated by age, gender, disabilities and ethnicity is inadequate. Inadequate information about the risks faced by these groups meant that their specific needs were often overlooked.

The misconception that older people and persons with disabilities are weak and helpless is deeply embedded in people's mind-sets. They are seen primarily as 'victims' rather than capable equals equipped with considerable resources to deal with disasters. Since media reports lack enough evidence of and data on the exclusion of older people and persons with disabilities, the issues of these groups have not been prioritized by either government or non-government stakeholders, especially in their post-disaster interventions. Thus, this study, whose findings minimized data gaps regarding the understanding of the issues faced by older people and persons with disabilities, was urgently required. This study aimed to fill these gaps in the seven worst earthquake-affected districts.

1.3 Study objectives

This study of the impact of the Nepal Earthquake 2015, aims to understand the impact factors leading to the exclusion of older people and persons with disabilities from humanitarian action, barriers to their inclusion, and the extent to which their skills and knowledge were utilised to promote inclusive humanitarian action and, using this understanding, to formulate a set of recommendations for promoting inclusion. These recommendations will be used to sensitise the broader humanitarian community to the need for inclusive disaster risk management practices in future emergency responses which pay attention to factors such as gender, age, disability and ethnicity, and build upon the capacities of older people and persons with disabilities.

This impact assessment study was guided by the following six key questions:

1. What was the impact of the earthquake on older people and persons with disabilities?
2. What were the roles of gender, age, disability and ethnicity in relation to the impact of the disaster?
3. What capacities do older people and persons with disabilities have for coping during emergencies?
4. What factors restrict older people and persons with disabilities from accessing humanitarian aid?
5. To what degree do humanitarian actors address the needs of older people and persons with disabilities during disasters?
6. What are the institutional barriers to inclusion as well as to the documentation of good practices?

Chapter 2: Study methods

In this study, a mixed method comprising quantitative as well as qualitative impact assessment tools was applied to address the six key study questions. A scientifically rigorous procedure was adopted to determine the sample size. The psychosocial impact was assessed with a quantitative analysis while the qualitative assessment, which was extracted mainly from interviews and group discussions, was used to explore individual-level variations in the earthquake's impact. Secondary information based on literature was used to validate and substantiate the findings from the empirical fieldwork.

2.1 Sample

A cross-sectional survey of older people and both adults and older persons with disabilities in seven severely affected districts was conducted eight months after the earthquake that first hit in April 2015.

Respondents included people living in their own partially damaged houses as well as those living in temporary shelters.

Altogether there were 1,515 respondents from seven districts (Table 1). The sample size was estimated by using the formula as used by Krejcie and Morgan (1970)⁴. Every household was located in two randomly selected village

development committees (VDCs) lying in project areas in the earthquake-affected districts (Annex 2, Tables 2). The sample size was based on census data from the Government of Nepal's Central Bureau of Statistics. The sample sizes for both older people and persons with disabilities were estimated based on data collected during the 2011 census. The sample size was estimated at a 2.5% margin of error.

District	Total sample	Total sample		
		Older people	Persons with disabilities	
			Old age	Adult
Kathmandu	222	181	15	26
Bhaktapur	217	177	13	27
Kavre	213	149	36	28
Sindhupalchock	213	159	34	20
Nuwakot	220	130	73	17
Gorkha	209	166	23	20
Makwanpur	221	180	12	29
	1515	1142	206	167

Of the 1,515 respondents, 1,142 were older people and 373 were persons with disabilities (206 older people with disabilities and 167 adults with disabilities) (Table 1 and Annex-3). Older people were identified as those aged 60 years and above. The status of a person with disabilities was ascertained by checking that he or she had a disability identity card and confirmed by the research assistant who administered the questionnaire. Eight different categories⁵ of disabilities were considered. Analysis of the results was intended to identify the proportion of older people and persons with disabilities affected by post-traumatic stress disorder (PTSD), anxiety or depression, as well as how they perceived the overall social support they received from family, friends, kin, and society.

The prevalence of PTSD, anxiety or depression, as well as risk factors predisposing a respondent to develop these conditions, was analysed. An association analysis was performed separately for older people and depression. The probable factors, both impact and protective, contributing to the traumatic situation were estimated by employing a 'multivariate logistic model'.

2.2 Assessment

The intensity of the earthquake-specific trauma was assessed by asking six key questions: i) whether one or more of the respondent's family members had died or was missing due to the earthquake; ii) whether the respondent had been physically injured by the earthquake; iii) whether the respondent's home had been destroyed in the disaster; iv) whether the respondent had lost other properties or belongings as a result of the earthquake; v) whether the respondent had lost his or her livelihood or work as a result of the earthquake; and vi) the respondent's initial intensity of fear (on a four-point scale) when the earthquake occurred.

This study used the 17-indicator PTSD Checklist-Civilian Version (PCL-C) to assess the prevalence of PTSD among older people and persons with disabilities. The PCL-C assesses three clusters of symptoms. They include five items for re-experiencing, seven items for

⁴Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educpsychol meas.*

⁵As identified by the Central Bureau of Statistics in its Living Standard Survey (2011): physical disability, disability related to vision, disability related to hearing, deafness, disability related to voice and speech, blindness, mental disability, and multiple disability.

avoidance or numbing, and five items for hyper-arousal. Participants indicated the extent they experienced each symptom as a result of the earthquake on a scale from 1 (not at all) to 5 (extremely). Following Li et al. (2010)⁶, a score of 44 or above was used to predict a clinical diagnosis of PTSD.

The Hopkins Symptoms Checklist-25 (HSCL-25) was used to screen for probable anxiety and depression disorders. This checklist consists of 25 items: 10 for anxiety and 15 for depression, with scores ranging from 1 (not at all) to 4 (extremely). The reference period for symptoms was the month before the survey was undertaken. A mean score above 1.75 was considered to predict a clinical diagnosis of anxiety and depression disorders across different cultures.

The Perceived Social Support Scale (PSSS) was used to measure the level of social support experienced by earthquake survivors. It consists of 12 items with scores ranging from 1 (strongly disagree) to 7 (strongly agree).

The study quantified the incidence of PTSD, anxiety and depression and the level of social support provided using the PCL-C, the HSCL-25, and the PSSS tools. The reliability and validity of all three tools was checked and verified in a previous study (Zhang & Wang, 2011). If the PTSD value was more than 44, we assigned the individual to the "intrauma" class; if the PTSD value was less than 44 they were in the "notrauma" class. The "intrauma" class is the positive class.

2.3 Qualitative methods

The qualitative methods applied included both a review of secondary data as well as an analysis of the empirical primary data gathered through participatory approaches. Desk study helped clarify the issues which older people and persons with disabilities face, particularly during and after disasters. Review of the Post-Disaster Needs Assessment (PDNA) Report (NPC, 2015) helped the research team develop an understanding of the context of the earthquake. This, in turn, paved the way to structuring tools for the field survey.

The qualitative assessment gathered information on coping capacities, barriers for inclusion due to not having proper support system in place, needs, good practices, challenges, and cross-cutting issues, particularly gender and ethnicity. Researchers developed a checklist for the key informant interviews (KIIs), focus group discussions (FGDs) and case studies. All the checklists and questions were translated into Nepali.

Good practices were documented as part of the FGD process. Case studies were collected systematically to illustrate the challenges older people and persons with disabilities face. Interviews were conducted with local development officers in district development committees (DDCs), district administration offices, VDC secretaries, I/NGOs representatives, local leaders, and officers in line ministries.

Four research supervisors and 12 research assistants took part in intensive three-day training in research methodology, administering the survey questionnaire, and the psychosocial characteristics of older people and persons with disabilities. The research supervisors were mainly responsible for collecting qualitative information and monitoring the research assistants as they administered the household surveys. Simulation exercises and pilot testing of the questionnaire was conducted on the final day of the training helped both the research supervisors and the research assistants to attain conceptual clarity about the issues of older people and persons with disabilities. Having an academic degree in either psychology or social work was mandatory for all research supervisors and assistants.

⁶Li, H., Wang, L., Shi, Z., Zhang, Y., Wu, K., & Liu, P. (2010). Diagnostic Utility of the PTSD Checklist in Detecting PTSD in Chinese Earthquake Victims 1, 2. *Psychological reports*, 107(3), 733-739.

A total of 28 FGDs, four per district, two with older people and two with persons with disabilities, were held. FGDs were focused on the overall impact of the earthquake and took into consideration both gender and ethnicity. Alongside the FGDs, case studies that exemplified the challenges faced by older people and persons with disabilities were collected. Key informants were selected based on sector and included health post staff and village community health workers (VCHWs) for their knowledge about physical and mental health impact. Social and political leaders, teachers and CBO representatives were other key informants. A total of 56 KIIs were carried out in the seven districts. To assess the system of relief aid, researchers consulted local NGO workers and political leaders in a process known as "snowball sampling." KIIs with social leaders and teachers helped researchers identify issues related to ethnicity and caste. To gather information on gender and multiple exclusion, researchers interviewed social leaders and women activists, while to capture the views of duty bearers they interviewed VDC secretaries, members of District Disaster Relief Committees (DDRCs), officials of relevant government agencies and private organizations. To improve the quality of the data, researchers consulted a variety of local government authorities, relevant government agencies and various civil society organizations. All the information thus collected were tabulated, synthesised and analysed to arrive at key conclusions.

2.4 Ethics

Mechanisms were in place so that the study would not present any harm to the lives and wellbeing of older people and persons with disabilities during fieldwork. Each research assistant and supervisor explained the objectives of the study to every respondent and observed a common set of do's and don'ts during the fieldwork. The checklist and guide questions were prepared so that none would humiliate or question the beliefs of older people and persons with disabilities. Verbal consent was received prior to the administration of the survey. Family members responded on behalf of persons with disabilities who had speech and /or hearing disorders.

Chapter 3: Findings and analysis

The findings and analysis were shaped by the six key study questions outlined above in chapter 1. The main issue analysed was the extent of the psychological impact of the earthquake and the disproportionateness of that impact in terms of gender, age, disability and ethnicity. It also considered capacity to cope with the impact of an emergency by taking into account both individual and household assets and access to resources. Older people and persons with disabilities are likely to find that their access to humanitarian aid is limited because Nepal does not have a proper system in place and is not prepared to run an inclusive disaster risk reduction program. This study analysed the factors that restrict older people and persons with disabilities from accessing humanitarian aid. To do so, it investigated the degree to which humanitarian actors addressed the needs of older people and persons with disabilities after the earthquake. Finally, the study presents the institutional barriers to inclusion and documents good practices.

3.1 Impact of the earthquake on older people and persons with disabilities

The extent and nature of the psycho-social impact was measured in terms of three possible responses: stress (trauma), anxiety, and depression. The various impact and protective factors associated with this impact that the study assessed were gender, ethnicity, family loss, property loss, livestock loss, and educational level. The following section presents the prevalence rates of trauma, anxiety, and depression among older people and persons with disabilities. The section after that presents the associations between these three psychological impacts and the various impact and protective factors.

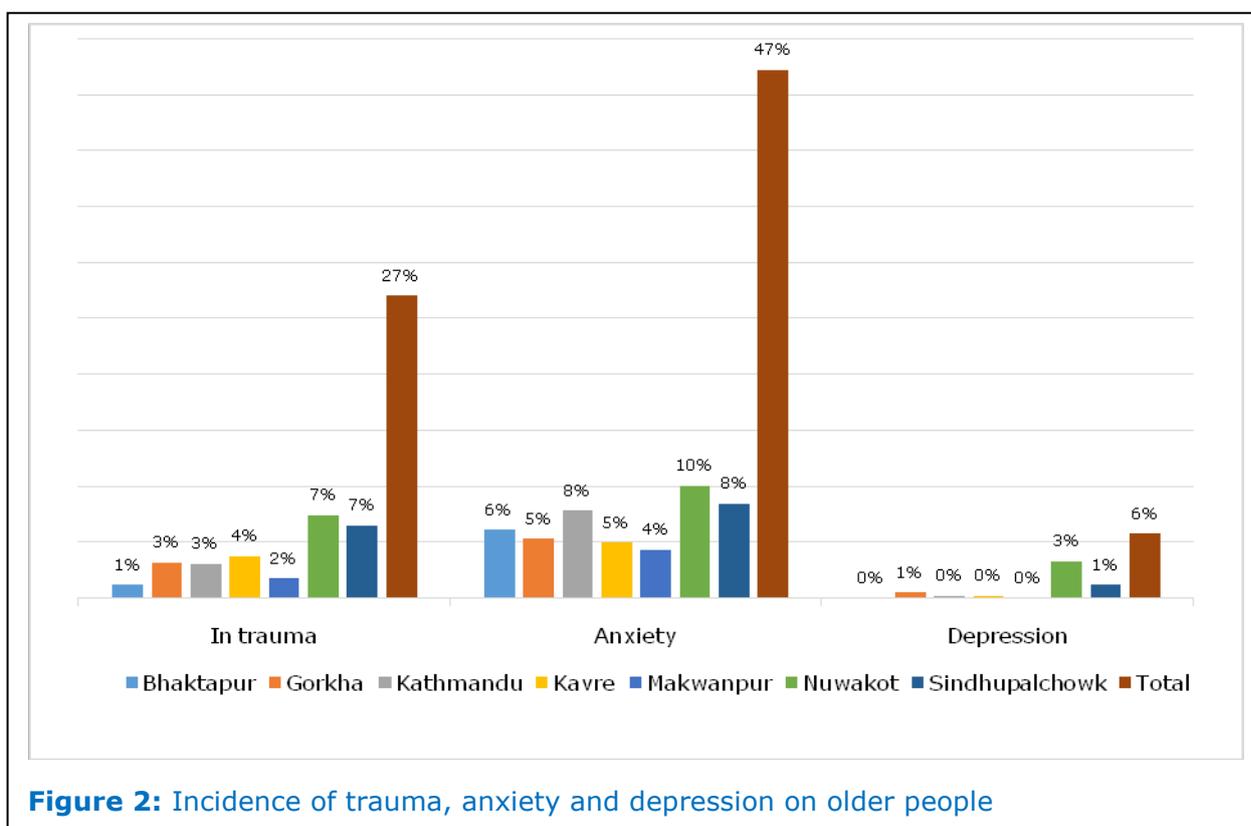
3.1.1 Psychosocial impact

Psychological impact	Mean	SD
Trauma	2.12	0.73
Re-experience	2.35	0.90
Avoidance	2.00	0.77
Hyper-arousal	2.06	0.81
Anxiety	1.77	0.57
Depression	1.09	0.36

a. Psychosocial impact on older people- trauma, anxiety and depression

On average, older people experienced more trauma than anxiety or depression (Table 2). Most people suffered from recurrences of the earthquake experience (Table 2, mean=2.35). The average value of depression (mean=1.09) is much lower than the mean score of 1.75 that is considered to predict clinical diagnoses of depression in older people, meaning that depression is not a very severe among the study sample.

About 27% of older people were traumatized and 47% anxious, but only 6% were depressed. Older people in Nuwakot, Sindhupalchowk and Kathmandu were the most traumatized, in that order (Figure 2). Rates of depression were also highest in Nuwakot and Sindhupalchowk, in that order.



The rates of trauma and depression reported less than those found in China (Zhang, Shi, Wang & Liu, 2011) of similar scale of earthquake, but the rate of anxiety was about 50%, a fact which may result in a future rise in cases of depression.

The trauma, anxiety and depression suffered by older people were analysed in relation to factors like disability, gender, family loss, property loss, livestock loss, educational level and social support. Education and social support were considered protective (coping) factors whereas gender, family loss, property loss and livestock loss were considered as impact factors. Both impact and protective (coping) factors are analysed. Table 1 in Annex 1 presents the findings described in detail.

The study found that gender has an impact: older women suffered more from trauma, anxiety and depression than did older men ($\alpha=1\%$). More older women than older men reported having experienced trauma, anxiety, and depression, suggesting that older women were more vulnerable to the psycho-social impact of the earthquake than the older men (Table 1, Annex 1). Significant ($\alpha=1\%$) number of people were in trauma and anxiety to the loss of family and property. Family loss was defined as the death of one or more family members in the earthquake. However, study did not find any evidence of association between family loss and property loss to depression. Likewise, livestock loss was associated with trauma, anxiety and depression. This implies that there were significant cases of older people in trauma, anxiety and depression who lost livestock in the earthquake. This fact suggests that livestock is such an important source of livelihood for older people that its loss has a profound negative impact. In rural Nepal, livestock is broadly linked to the livelihood system of a farmer and complements earnings from farming.

On the other hand, education was negatively related to incidence of trauma, anxiety and depression (Table 1, Annex 1). There were fewer cases of people in trauma who had above primary level of education. Mental health impacts were less common among those with more than a primary education than those with only a primary level education. This result suggests that having more years of formal schooling builds people’s capacity to cope successfully with trauma, anxiety, and depression.

b. Psycho-social impact on persons with disabilities

Psychological impact	Mean	SD
PTSD	2.24	0.78
Re-experience	2.49	0.96
Avoidance	2.11	0.81
Hyper-arousal	2.17	0.85
Anxiety	1.85	0.62
Depression	1.16	0.39

Descriptive statistics result indicated that older people with disabilities experienced more trauma, anxiety, and depression than did older people without disabilities (Table 2 and Table 3). The mean comparison test confirmed the statistically significant ($\alpha=1\%$) difference in the feelings of trauma among older people and persons with disability, a fact that indicates that disability is a high impact factor.

The majority of older people with disabilities had physical (32%), visual (29%), or hearing-related (13%) disabilities (Figure 3). A significant

proportion of older people with disabilities were found to be experiencing either trauma and anxiety or depression, or a combination of mental health effects.

Of the 373 persons with disabilities respondents, 32% were traumatized, nearly 50% anxious, and 9% depressed (Figure 4). Of the traumatized, 38% were residents of Nuwakot, 16% each were residents of Kavre and Sindhupalchwok, about 10% each were residents of Kathmandu and Gorkha, and the remaining 9% were residents of Bhaktapur and Makwanpur. About 35% of those who were anxious resided in Nuwakot, 15% in Kavre and about 10% each in the remaining districts. About 65% of the depressed resided in Nuwakot and 21% in Makwanpur. The result shows that the prevalence of anxiety is highest in all the district.

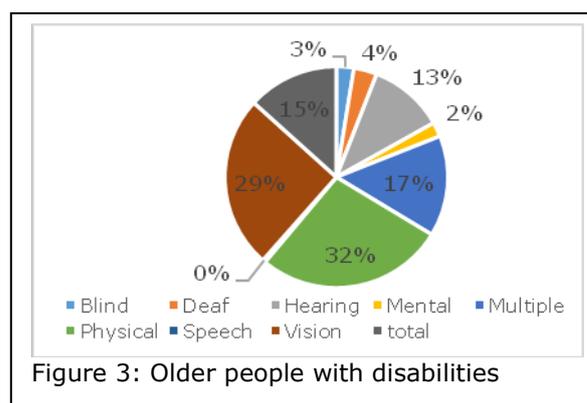
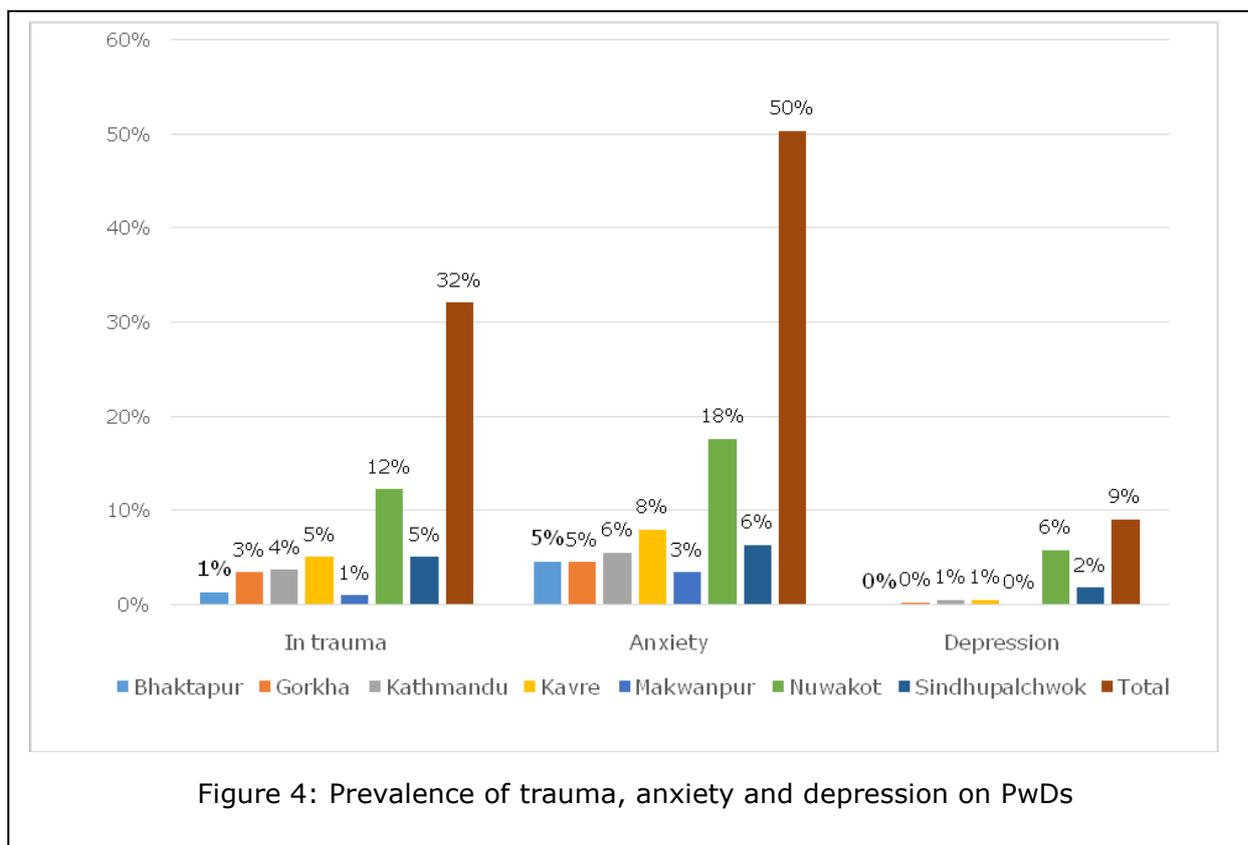


Figure 3: Older people with disabilities

The cases of persons with disabilities who had experienced trauma, anxiety, and depression were assessed in relation to their gender, the loss of family, property and livestock, and their level of education. As was done for older people, impact and protective factors were analysed for persons with disabilities. Education was considered protective (coping) factor while

gender and various losses were impact factors. The results of the association analysis of trauma, anxiety and depression are presented in Table 2 (Annex-1).



There was a statistically significant association between trauma, anxiety and depression and gender: women with disabilities were more likely than men with disabilities to experience trauma, anxiety, and depression, suggesting that they are more vulnerable (Table 2, Annex 1). One possible explanation is that women have lower levels of mobility and access to information than men do. There was also a positive association between trauma and family loss: the incidence of trauma increased with the loss of family members ($\alpha=1\%$), but there was no association between family loss and either anxiety or depression. Property loss also showed a significant association with the trauma and anxiety experienced among person with disabilities and is a key impact factor. Livestock is the main source of livelihood in the earthquake-affected districts and, not surprisingly, the study confirmed that association between trauma and anxiety and livestock loss was statistically significant. Education is considered a protective factor which can ward off trauma. The study found few cases of persons with disabilities experiencing trauma, anxiety and depression that had more than a primary level of education, a fact suggesting that education is a key protective factor. The test of association indicates that there is a statistically significant association between trauma, depression and anxiety and level of education, but that association was weak in the case of depression. Educated older people were less likely to experience trauma, anxiety or depression.

3.1.2 Perceived social support impact

a. Perceived social support across districts and ethnicity for older people

Three categories of perceived social support were considered, namely, support from family, support from friends, and relatives. Such support was considered to protect the recipient from the impact of the earthquake (Figure 5, annex-4). Social support also provided those who received it more capacity to cope with the impact. Social support after the earthquake was greatest in Nuwakot and Bhaktapur districts and the least in Sindhupalchowk and Kavre

districts. The null hypothesis that there was no difference in perceived social support across the districts was also checked. The statistically significant result (Table 5, Annex-1, $\alpha=1\%$) means, however, that perceived social support was not the same in all districts.

Perceived social support was also assessed across each of the districts (Table 3, Annex-1). At the statistically significant alpha (α) values of 1%, social support in Bhaktapur was higher than that in all other districts except Kathmandu and Nuwakot, where no statistically significant difference was found. Similarly, social support was significantly lower in Gorkha than in Nuwakot and Sindhupalchowk. Again at statistically significant values, social support in Kathmandu was higher than that in Kavre and Sindhupalchowk, but lower than that in Nuwakot. Social support in Kavre was lower than that in Makwanpur and Nuwakot, but higher than that in Sindhupalchowk. And social support in Makwanpur was higher than that in Sindhupalchowk, but lower than that in Nuwakot. Clearly, people in different districts had disparate perceptions of levels of social support. In general, the study revealed that districts which received more external support from the government and humanitarian agencies during the response and relief phase had lower rates of perceived social support.

Perceived social support across ethnicity was assessed (Figure 6, Annex-4) with respondents categorized broadly as Brahmin, Chhetri, *Dalit*, *Janajati*, and other. Older *Dalit* people reported the lowest rates of social support and older *Janajatis* reported lower rates than both older Brahmins and older Chhetris. The category labelled "others" (ethnic minorities) reported the highest rates of perceived social support. However, overall perceived social support was not statistically significant (Table 4, Annex-1) across the ethnicity, implying that perceived social support did not differ by ethnicity in general.

b. Perceived social support across districts and ethnicity for persons with disabilities

Perceived social support was assessed across the districts. Social support is vital to recover from the impact of earthquake. This study considered perceived social support as protective factor. Persons with disabilities residing in Bhaktapur had the highest mean of perceived social support (the likelihood that a persons with disabilities will receive support from family, friends or someone close to them), followed by Nuwakot, Makwanpur, Kathmandu, Kavre, Gorkha, and Sindhupalchowk (Figure 7, Annex-4). Testing the hypothesis to see if there was a significant difference of mean perceived social support across these districts revealed that the difference was not significant (Table 4, Annex-1).

This association test was unable to identify where such differences occur. To do that, an honesty significant difference was estimated between the mean perceived social support in each of the districts (Table 6, Annex-1). Perceived social support in Gorkha, Kavre and Sindhupalchowk was significantly lower than in Bhaktapur. Respondents in Sindhupalchowk felt that they had significantly less social support than residents in Kathmandu, Makwanpur and Nuwakot. This difference seems logical because the earthquake's impact on Sindhupalchowk was greater than it was in Kathmandu, Makwanpur and Nuwakot and the district therefore received more external support from government and humanitarian agencies. The presence of considerable external support negatively impacted the level of communal ties, solidarity and social support. The presence of humanitarian agencies was high in Sindhupalchowk because damage was large-scale and because it is easy to access from Kathmandu. Interactions with stakeholders revealed, too, that political influence was high in Sindhupalchowk.

Perceived social support was also assessed with regard to ethnicity (Figure 8, Annex-4). Rates of perceived social support were highest among Brahman and *Dalit* respondents and lowest among *Janajati* respondents, but there were no statistically significant differences (Table 7, annex 1). The study conclude, then, that there was no difference in average perceived social support among the different ethnic groups in the study districts.

3.1.3. Socio-economic impact

The impact of the earthquake on older people and persons with disabilities was manifold. The impact factors identified through quantitative assessment were losses of family members, property and livestock. Education and social support were assessed as protective factors. Micro-assessment is also important to understand the extent of the impact on these groups. To supplement the quantitative findings, qualitative assessment was used to capture the specific impact the earthquake had at the individual level. The qualitative assignment covers the level of support that older people and persons with disabilities got before the earthquake, the support that they received during the response and relief phase, and the various social and economic impacts on them due to the earthquake.

a. Distribution of allowances and relief materials

Excepting Ratomate⁷ in Nuwakot, the distribution of old age and disability allowances was regular even after the earthquake; neither the timing (every four months) nor the process changed. In fact, in the study VDCs in Sindhupalchowk and Kavre districts, allowances were actually distributed more promptly. Because older people and persons with disabilities faced many difficulties following the earthquake, VDC officials in Sindhupalchowk served them close to the recipients' homes. Of the total older people (n=1,142), 34% said that they had received their old age allowance very close to their homes, while of the total persons with disabilities (n=167), 42% were satisfied with the way they received their disability allowances from the VDC. Likewise, the VDC official in Dolalghat of Kavre, who himself is disabled, served older people and persons with disabilities right at their doorsteps. Older people and persons with disabilities in other districts had to visit their respective VDC offices to receive their allowances, as was the case before the earthquake. No special mechanism was needed to distribute allowances after the disaster; the fact that distribution was done on time and, in two cases, closer to home.

Despite all physical, geographical and social hardships, older people and persons with disabilities went to their respective VDC offices to receive their allowances. In some cases, family members of persons with disabilities and older people went to collect allowances on their behalf. Altogether, 28% of older people (n=1,142) and 23% of persons with disabilities (n=373) reported that they had lost their identity cards in the earthquake. Some respondents said that they had lost their identification cards during the earthquake, but all of them had new ones made with the help of local political leaders and VDC officers. In Sangachok, Sindhupalchowk, the VDC office required that someone verify the identity of those who had lost their cards. Mr Bhupendra Shrestha, aged 72, Sangachowk explains:

"I lost my identification card in the earthquake. I had no other means to prove that I was eligible for the older people allowance, so a friend from the neighbourhood and representatives of political parties verified my age. I am thankful to the VDC office for not depriving me of my allowance. Initially, I could not focus at all when I discovered that my identity card was lost under my collapsed house."

In general, relief material was distributed on the basis of households. Relief materials were targeted at older people and persons with disabilities in the working VDCs of HAI and CBM. However, there was no strict rule that demanded that the person named as household head actually appeared to collect the relief. "I am really thankful that my son was able to collect aid materials in my name," said an older person with a disability from Thumi, Gorkha. "If this provision had not been in place, there was no way I would have been able to get any relief materials."

This flexibility ensured that every household got relief materials, but it also posed some unforeseen challenges to those older people who were abandoned by their family members but who received aid in their names. Out of the total older people consulted (n=1,142), 14%

⁷Distribution of allowances was delayed for eight months because (i) a VDC Secretary has to look after 2-3 VDCs in geographically remote areas, (ii) the destruction of some VDC offices, (iii) vacant offices, (iv) conflicts and disputes experienced in the past during the distribution of allowances, and (v) delays in the release of funds.

respondents reported that they did not collect relief aid themselves. In most instances, it was adult family members who received the relief material. If older people and persons with disabilities did not access their allowances and relief materials by themselves, they had, they shared in FDGs, little chances of using either independently. Meera Maharjan (name changed), aged 73, of Dharmasthali, Kathmandu had this to say about her experience:

"Whenever they [son and daughter-in-law] needed things, they used to come to my place seeking the things I received from relief distributing agencies. I gave them whatever they asked for. Since then, they have never returned. They completely disappeared because I have nothing more to give."

In all districts, except for in those families in which the middle generation was missing and in those where older people were the sole decision-makers, older people were forced, they confided in FDGs, to abide by whatever their sons and daughters-in-law, or other younger family members decided for them. In the majority of cases they had limited choices and hardly any influence on decisions made regarding resources received by the family as a whole. Their trouble was exacerbated if they did not have control over their old-age allowances as their children would take and spend their allowances. The incidence of such appropriations increased after the earthquake. Persons with disabilities in Sindhupalchowk and Kavre collected their allowances on their own. In some cases, as revealed in key informant interviews and FDGs, allowances were distributed at road heads, from where many older people and persons with disabilities were not able to collect them by themselves. Instead, they had to rely on a family member. In a few cases, including some in Nuwakot, the families of people with disabilities collected the disability allowances.

b. Livelihood impact

An analysis conducted by HelpAge International as part of the 2015 Disaster Risk and Age Index shows that socio-economic vulnerability significantly elevates the impact of a disaster on older people. Poverty affects older people's access to basic goods and services and poses a risk for their survival during a crisis and for their recovery afterwards. The poor are usually located in marginal areas and often live beyond the reach of information. As a result, poverty poses a barrier to accessing relief and decreases people's capacity to cope with the impact of a disaster due to the resultant weak assets base.

According to the PDNA (2015), in the aftermath of the earthquake older people and persons with disabilities faced many challenges in accessing livelihood opportunities because bullocks died, ploughs broke, seed were buried, irrigation system were rendered defunct, and tools were destroyed. The report also states that about NPR 23.5 billion is needed to restore the consumption of the people at most risk (households with persons with disabilities, single women, children, and older people) in the 14 most-affected districts to pre-earthquake levels.

One of the key adversities was the loss of their personal saving from allowances and as gifts received from daughters, relatives and friends. Whatever savings they had made -were buried under the rubble of their houses. Out of the total older people interviewed (n=1,142), 72% said that they lost their personal savings in the earthquake. Personal savings are a key source of money during an emergency and other household-specific occasions. Older people were not able to figure out where their money was buried, a fact which increased their levels of mental stress.

Food scarcity was one immediate impact of the earthquake in the study districts. Most of the houses were partially or completely damaged, especially in Gorkha, Sindhupalchowk, Kavre and Nuwakot. Food scarcity immediately in the aftermath of the earthquake resulted due to the loss of property and livestock. People did not grow and work in the farm land because of the earthquake fear. Of the total older people consulted 95%, 50% and 3% respondents in this study reported the loss of property, livestock and one or more family members respectively. Gorkha, Sindhupalchowk, Kavre and Nuwakot had higher numbers of casualties and injuries and more property was lost than elsewhere (Annex-2, Table 3). In all the study

districts, in some cases in which houses were destroyed (Annex-2, Table 4), but not all, food stocks were buried under the rubble.

Impacts were more visible among the families run by single women who, as the head of the household, were responsible for looking after other members, making decisions, and securing a livelihood for the family. Maiya Dhamala, aged 76, a woman with disabilities from Thaha Municipality, Makwanpur, endured one of the toughest periods of her life. The food stocks of her family were buried under her fallen house, and she, as the bread earner of the family, not only had to visit distribution points to collect food relief but also manage resources to build a temporary shelter and safeguard her family's belongings.

Older people and persons with disabilities with limited food stores and low food security were most affected by the earthquake and are at high risk of experiencing hunger, especially as their families earn little and have little diversification in their livelihood strategies. Those older people and persons with disabilities with high food security and a regular income source were less at risk. In this context, nutritious food support targeting older people and persons with disabilities is essential to ensure they get nutritionally adequate diet. Food- or cash-for-work programs could be apt programs to address the specific food requirements of older people and persons with disabilities.

The food distributed by humanitarian agencies, including instant noodles and beaten rice, was not older people friendly. Drawing on a local proverb, older people said that they were thrown into an irresolvable dilemma about whether to eat or not⁸ and Gurung (2015) found that "older people could not chew and swallow most of the dry food like beaten rice and noodles." Numa Shrestha, aged 71, a permanent resident of Thaha Municipality, Makwanpur, explained her predicament:

"In the first place, I usually don't have any information about when and where aid is going to be distributed. Most of the time, I realize that only once my neighbours start moving. Then, at the eleventh hour, I have to rush to the distribution centre, which is nearly half an hour's walk from here. As I can't walk as quickly as others, I tend to be very late. By the time I arrive, the distribution centre is already very crowded. It feels like a curse to be waiting in the queue with all kinds of other people who push and yell all the time. In such a time of crisis, I was unable to reject anything that was forthcoming in the form of food, but all I got was noodles and beaten rice. Even if I managed to eat with just my gums, I would not be able to digest it. Agencies have given us no more than salty biscuits and baby food."

The behaviour of relief aid workers drew mixed reactions from older people and persons with disabilities of different districts. For instance, Ram Tamang, aged 77, from Chitlang, Makwanpur, said that it was acceptable for relief aid distributors to shout sometimes as their shouting was mostly intended to manage the queue and the overall distribution process and that, for the most part, distributors were well-behaved. Older people and persons with disabilities of Dolalghat, Kavre, disagreed. They were dissatisfied with the rude behaviour of officials from government agencies who gave cash support to all red-card holders. In response, a VDC office assistant of Dolalghat justified officials' behaviour:

"We were under a lot of pressure to distribute the relief as soon as possible. As the data changed frequently, we faced a great challenge. Cases of splitting families were rampant, so we sometimes had to be harsh. We were in a dilemma about who to include and who to exclude."

In all districts, older people and persons with disabilities experienced discrimination in terms of food and cash distributions and humanitarian workers did not adequately cater to their specific needs and requirements. The main barriers were poor access to information, limited mobility, and the lack of any special emphasis on the distribution of age-sensitive foods and other relief materials.

⁸*nakhau vane dinvarikosikar, khau vane kanchabaukoanuhar*

Case study 1: Dhana Kumar Lama laments his fate

Having lost all his belongings and food stocks to the earthquake and been abandoned by his family following the earthquake to live alone in a temporary shelter, Dhana Kumar Lama, aged 70, of Aaruabang, Gorkha, said he had no option but to rely on relief to survive. The cold and congested tunnel in which he lives makes him feel as if he is sleeping in a grave. Lama is unable to work in the fields to grow food or to do any other kind of work. The old-age allowance he received was all taken by his son. *"We are lucky to have kind-hearted neighbours. If they did not help us, I and my wife would die helplessly," he expressed.* Though challenged by his age and physical ability to access relief, he drags himself to the distribution centre, which is an hour away from his shelter. Lama further said that *"everyone treats someone kicked by fate badly. God is treating us badly, so we can expect no better from people. I wish they had seen our pain in losing everything and realize that we travel a long distance just to stand like beggars to receive whatever they give, compromising our dignity."*

3.2 Roles of gender, age, disability and ethnicity to the impact of the earthquake

This section looks at the differences that gender, age, disability, and ethnicity played in the impact of the earthquake. The study shows that all of these variables had a disproportionate impact; more precisely, it was women, the very young and the very old, the disabled, and ethnic minorities who were most impacted. The PDNA report by Nepal Planning Commission (2015) also concluded that the earthquake had the greatest impact on women, children, and persons with disabilities and that that impact was high.

3.2.1. Gender and age specific impact

The analysis of trauma, anxiety, and depression experienced by older people after the earthquake showed that that the prevalence rate of all three mental health conditions is high among women (Table 4). However, the average rate of trauma was below the clinically diagnostic score of 44 across all age and gender categories. Similarly, rates of depression were also less than the average clinically diagnostic score of 1.75 in all categories. In contrast, the average rates of anxiety for all age categories of older women were higher than the average clinically diagnostic score of 1.75 and were higher than for older men. The study proved that anxiety is a problem and that older women suffered more than older men did.

Table 4: Gender-based PTSD, anxiety, and depression in older people

Age Category	Gender		Total ⁹
	Female PTSD, anxiety and depression scores	Male PTSD, anxiety and depression scores	
Age (60-65)	39 (2) {1.15}	33 (1.6) {0.98}	35 (1.8) {1.07}
Age (65-70)	38 (1.9) {1.14}	34 (1.76) {1.04}	37 (1.84) {1.096}
Age (70-75)	38 (1.85) {1.16}	34 (1.68) {1.029}	36 (1.76) {1.091}
Age (75-80)	39 (1.97) {1.197}	38 (1.81) {1.138}	38 (1.88) {1.168}
Age above 80	36 (1.8) {1.1}	32 (1.66) {0.97}	34 (1.7) {1.04}

⁹ Figures outside the bracket is stress, inside small and curly brackets represent scores of anxiety and depression respectively.

With regard to persons with disabilities, among adults (respondents below 60 years of age) and older persons with disabilities, more women than men suffered from trauma, anxiety, and depression (Table 5). However, the average clinical score for PTSD was less than the clinically diagnostic score of 44. Older person respondents with disabilities scored higher average rates of PTSD, anxiety, and depression than did adult respondents with disabilities, suggesting that older people were disproportionately affected. The average rates of anxiety among both older men and women with disabilities demonstrate that it is above the clinically diagnostic rates. Older women with disabilities had the highest rates of anxiety. Adult women with disabilities were also diagnosed as being clinically anxious. The rates of anxiety among adult men did not exceed the clinical cut off of 1.75.

Table 5: Gender-based PTSD, anxiety, and depression in persons with disabilities

Disability	Gender		Total
	Female PTSD, anxiety and depression scores	Male PTSD, anxiety and depression scores	
Old age disability	41.15 (2.048) {1.28}	39.42 (1.91) {1.18}	40.37 (1.98) {1.24}
Adult disability	38.756757 (1.83) {1.13}	31.98 (1.54) {.99}	35.093 (1.67) {1.06}

Multivariate analysis (Table 8, Annex-1) revealed that the prevalence of probable PTSD was significantly higher in men than women and that older men were nearly twice as likely as older women to develop trauma (odds ratio=1.83). The probability of older people suffering from PTSD was, in statistically significant terms, lower in Gorkha, Kathmandu, Kavre, Makwanpur, Nuwakot and Sindhupalchowk districts than in the district of comparison, Bhaktapur. Qualitative assessment showed that older people in Bhaktapur felt excluded from the receipt of relief and believed that the presence of government and humanitarian agencies was low during the relief and response phase. In contrast, older people in Bhaktapur reported higher rates of perceived social support than did respondents in other districts. Despite their having a good perceived social network, however, older people in Bhaktapur were more prone to trauma.

Older people who lost family member(s) or property were less likely to develop PTSD than those who did not at the rate of 20% and 27% respectively (Table 3, Annex-1). People who did not lose property, livestock, or family are more likely to develop PTSD. Though counterintuitive, this finding seems very plausible. Even eight months after the April 2015 earthquake, people were experiencing frequent aftershocks and fear of another big earthquake and its likely impacts in the future. This experience follows their witnessing a great loss of human life and property in their communities. Witnessing others' loss, but not having to cope with one's own loss, is a profound source of trauma. The absence of family members who migrate abroad for work has had an impact on migrant families. A study conducted by ILO (2015) shows that more male than female migrants reported that their absence had a negative impact on their families during and immediately after the earthquake (71% of households with male migrants in comparison to only 23% of households with female migrants). Their absence has added another source of trauma to the lives of older people.

Multivariate logistic analysis demonstrated that persons with disabilities in the districts of Gorkha, Kathmandu, Nuwakot and Sindhupalchowk were less likely to experience trauma than in the comparison district, Bhaktapur¹⁰ (Table 9, Annex-1). Qualitative assessment showed that persons with disabilities in Bhaktapur felt that they were excluded from the receipt of relief aid and that the presence of state and humanitarian agencies during the relief and response phase was low. However, since substantial external support was lacking, persons with disabilities in Bhaktapur were more likely to have said that they received social

¹⁰ Any of the district can be taken as comparison district.

support. Despite that help, persons with disabilities were more likely than others to experience trauma, again because of the lack of external assistance. Initial fear and loss of a family member were less likely to contribute to trauma. Since the study was carried out eight months after the earthquake, the time elapsed played a role in helping people recover from the loss of family members and their initial fears.

The proportion of traumatized persons with disabilities with up to a primary level of education or no formal schooling was 13% less than for those who had more than a primary education, a result suggesting that educated persons with disabilities were more concerned than uneducated persons with disabilities about the security of their lives and their assets in the face of the impact of another strong earthquake.

Persons with disabilities who lost one or more family members were 10% less likely to be traumatized than those who suffered no such loss. Similarly, those persons with disabilities who had a strong initial fear were 41% less likely to develop trauma than those who had little initial fear. The incidence of trauma can be explained with reference to several factors. The study findings suggest that persons with disabilities who did not lose a family member, property, or livestock were more likely than a person with disability who did suffer such losses to experience trauma in the post-earthquake situation. The probable causes for greater trauma among the relatively unscathed include a recurrent fear of the experience of April 2015 earthquake and the fear of losing family or property and of seeing their livelihood (e.g. farming) destroyed precisely because those things had not, in fact, happened. This analysis confirms that the current state of psycho-social impact on persons with disabilities is likely to grow more severe in the future if further humanitarian and recovery support is not provided.

The psychological impact (trauma, anxiety and depression) of the earthquake as assessed eight months later did not seem very severe. However, the percentage of anxious persons with disabilities was about 50%, a value that may become more severe in the future.

3.2.2. Ethnicity and social inclusion

The PDNA report claims that it is important that women, children, older people and persons with disabilities as well as social welfare officers participate in all DDRC committees and clusters in order to ensure that the specific needs of these groups are identified and addressed in a coordinated and comprehensive manner. Despite this governmental provision, gender and social exclusion issues were not adequately considered in the actions taken in response to the disaster.

The study assessed the impact of the earthquake across ethnic groups. The results (Table 6) demonstrate that no ethnic group suffers from an average rate of trauma that surpasses the clinically diagnostic score of 44. However, rates among Dalit and Janajati communities are greater than those among other communities.

Table 6: Trauma, anxiety, and depression across ethnicity

Ethnicity ¹¹	Average scores of trauma, anxiety and depression		
	Older people	Persons with disabilities	
		Adult	Older people
Brahmin	35.003 (1.83) {1.07}	35.89 (1.71) {1.06}	43.90 (2.09) {1.30}
Chhetri	34.25 (1.75) {1.056}	33.12 (1.62) {0.97}	37.08 (1.87) {1.23}
Dalit	37.12 (1.76) {1.12}	34.9 (1.55) {0.99}	45.08 (2.18) {1.41}

¹¹ Scores in the small and curly bracket represents to anxiety and depression across the ethnicity

Janajati	35.63 (1.76) {1.05}	35.82 (1.7) {1.11}	38.77 (1.93) {1.18}
Other	31.67 (1.57) {1.04}	33 (1.7) {1.12}	-

The severity of anxiety among older people is high in all ethnic categories. The average scores of anxiety were above 1.75 in all ethnic categories, suggesting that most older people were suffering from clinical anxiety. Older people with disabilities had the highest scores of trauma, anxiety, and depression. Among different ethnic groups, older people with disabilities from the Dalit and Brahmin communities had the highest rates of trauma, anxiety, and depression.

Other issues related to gender- and ethnicity-based exclusion were explored in qualitative assessment. The study found that older women and women with disabilities rarely participated in meetings held at the community level after the earthquake. Individual and structural barriers, particularly social norms and practices, prevented them from participating in communal and household-level decision-making processes. Their absence then prevented from accessing information useful for them and ultimately from getting support and services.

The data from the study districts indicates that more women than men died or were injured during the earthquake (NPC, 2015). The reasons for this include women's low levels of awareness, the fact that they wear clothing like saris that are not easy to move quickly in, and the fact that it is they who are most responsible for children, household chores, and household belongings.

A common observation in all the study districts was that male members of the families assumed responsibility for collecting relief while women's role was to take care of children and running the household. Women were rarely seen at distribution points.

Older single women had to bear the impact of the earthquake alone but nonetheless found accessing humanitarian aid in Ratamate, Nuwakot, both VDCs in Gorkha, and Chitlang and Thaha Municipality of Makwanpur very difficult. The distance to distribution points was particularly problematic for them. Relief was most easily accessed by young men who could easily move through the crowd using their physical strength or even by quarrelling when deemed necessary. Older and disabled women, however, weakened by age and disability and restricted by norms governing women's behaviour, could hardly challenge these men or even young women. They had a hard time and were often pushed or yelled at while standing in line.

During FGDs, single women, older people and persons with disabilities opined that having no male family member was a serious setback to receiving relief. *"Being widows, especially at our advanced age, we could not push ourselves through a crowd of males to get the relief that had been brought to the village to distribute. A widow is always looked upon as a taboo, and this fact prevented us from accessing relief,"* said Sabitri Nepal, aged 61. Widows' face significant obstacles throughout their lives and the cumulative effects of years of discrimination on their social, economic, physical and psychological wellbeing are significant. Nevertheless, they regularly take on the great responsibility of being the head of a household and shaping the career for their children, even if they are isolated and destitute.

The plight of older women living only with their husbands is also serious. The problems faced by visually impaired Nani Maiya Shahi, aged 78, of Machhegaun, Kathmandu, who lived with her 80-year-old husband in a cold rented room which was destroyed by earthquake were considerable. She said that she was unable to move without her husband and that she felt as if the ground were still shaking and she could not endure being without her husband.

Older women were also distressed by often enforced separations from their families. The earthquake itself and its impact on families was a reason for older and women with disabilities to be abandoned.

Case study 2: How older single women were impacted by earthquake

Ratna Devi Thapa Magar, aged 65, a permanent resident of Gundu, Bhaktapur, is a single woman who raised three sons and a daughter on her own. In the end, however, she was abandoned by all of them after the earthquake. A widow for the past 31 years, Ratna was living with her second son, daughter-in-law, and two grandchildren. Her relationship with the daughter-in-law was a troubled one. According to her, the daughter-in-law used to frequently threaten to throw her out of the house.

The earthquake on April 25th provided her daughter-in-law an excuse to get rid of her. Her son and daughter-in-law moved into a single rented room, taking all of the household's valuables. They left her nothing, not even food. The only thing they left behind was seven goats, and that was only because their new landlord did not allow goats in his premises. Ratna Devi's daughter-in-law refused to take her along, blaming the lack of space, and she had no option but to live on her own.

She built a temporary shelter with the help of neighbours. She sold the seven goats as she couldn't accommodate them in her shelter and bought gold earrings. *"These are my savings," she said, showing off her earrings. "I will not have to depend upon anyone if any adversities like this one occur in the future."*

Violence against older women, mostly psychological violence perpetrated by family members, is another issue. Unfortunately, as the PDNA report points out, the risks of gender-based and sexual violence are largely ignored: "District courts are prioritizing serious crimes, which means cases of sexual and gender-based violence would not be a priority."

Older people who were expelled from their houses by their family members after the earthquake have not been able to access relief. Families that split up with the expectation that they would receive extra relief materials often abandoned older people. The government did not have a provision to provide relief, including cash support, to families that split up after the earthquake. This gap had an adverse impact on the ability of older people and persons with disabilities to access aid. The fact that many of these older people are women is a clear indication that there is an urgent need for better gender analysis when considering wellbeing and dignity in old age.

Moreover, older women with disabilities were burdened with work after their homes collapsed and many water sources and taps dried up. Women, who are the primary fetchers of water, found that their workload had increased. Older women, especially those with health problems like uterine prolapsed and poor eyesight, found it particularly difficult to fetch relief materials. Women consulted in Gorkha and Nuwakot opined that relief materials obtained on their behalf did not reach them. The practice of sending a proxy recipient was a factor in their exclusion.

In Machhegaun, Kathmandu, some aid agencies distributed relief only to so-called lower caste communities like Dalits. Those belonging to the upper-caste groups, including Brahmins and Chhetris, also received relief due to their influence. The most affected by this discrimination were the Magar community, which is considered a middle-level caste group. Clearly, political power and targeted support lead to minority families like Magars being excluded from receiving aid.

In Sangachwok, Sindhupalchowk, many private relief distributors, including the Federation of Nepalese Chambers of Commerce and Industry and individual donors, concentrated their relief efforts on the Majhi community, assuming that this community was the most vulnerable. While that was indeed the case those in charge of the relief did not consider the volume of support the Majhi had received earlier from other agencies and did not, despite the surfeit of help, divert their assistance to other needy areas. The system of distribution

often failed to yield fruits for the socially marginalized whose socio-economic condition was poor and who lacked political ties. This duplication of relief distribution resulted in the exclusion of older people and persons with disabilities in other communities who were in dire need of relief materials.

Government policy itself was discriminatory. While Dalit older people are eligible to receive an old-age allowance after the age of 60, other caste groups must wait until they turn 70. Older people from so-called upper-caste groups complained that they did not enjoy the same facility as their marginalized peers. *"The earthquake was indiscriminate in its harm,"* said an older Brahmin from Dharmasthali. *"I am not in less need of support just because I am a Brahmin."* Older people in Dhadhilkot, Bhaktapur, and Bhimtar, Sindhupalchok also raised a strong voice calling for providing an allowance based strictly on age or economic profile, not caste.

The main ethnic groups consulted during this study were the Brahmin, Chhetri, *Dalit* and *Janajati* communities. In homogeneous communities, for example, people of the same caste and similar economic background, such as the Newar community in Machhegaun, Kathmandu, and the Tamang community in Gerkhu, Nuwakot, relief was distributed fairly. However, in heterogeneous communities exhibiting diverse ethnicities, castes, and economic backgrounds, it was the more socially powerful, higher caste people and those with strong political connections that had greater access to relief.

It is an accepted fact that the possession of wealth and resources serves as a safety net against some types of adversity. Depending upon the degree of loss, assets may enable a person to recover on his or her own. That said wealth alone does not determine whether or not a person will need relief. A person who has lost a loved one, for example, but still has plenty of material resources, will nonetheless require psychosocial counselling. In addition, whether or not an individual decides to collect relief is based on the degree of his or her loss as well as whether he or she has the time and resources needed to access that relief.

Human nature is another crucial factor to consider. Sometimes, too, settlement location or loopholes in managing relief distribution are reasons a needy person is deprived of assistance; outright discrimination may not factor into the equation at all. All said, though, there is no question that poor older people and persons with disabilities with few sources of income having many family responsibilities are the most vulnerable group in society. It is they who have the least ability to cope with adversity. At the same time, older people fall among discriminated groups that, de facto, receive less relief than others.

3.3. Coping capacity of OPs and persons with disabilities during emergencies

Coping capacity can be assessed by taking into account the possession of or access to various assets, including community support networks, savings, income, and loans. An active community support network strengthens the social safety net and reduces the impact of a disaster. Savings and access to alternative sources of finance enable people to purchase the goods and services they need to better cope with the impact of the earthquake. The study assessed social amenities and community support networks in order to explore the social ties and support available to older people and persons with disabilities and also considered the influences of wealth and access to finance.

The coping capacity of older people and persons with disabilities varies by gender, age and ethnicity. The losses of property and livelihoods due to the earthquake affected the coping capacity of people. The study found that among the affected, it was the most vulnerable who experienced the greatest losses in the earthquake. Most vulnerable people had a difficult time getting back to normal after the disaster. They found it difficult to reconnect and re-establish relationships and rebuild their routines. Bolstering the vulnerable people's faith and supporting them to restart their livelihoods and reconstruct their houses would help them cope with the situation brought about due to the earthquake.

Social amenities, which include temples, community drinking water schemes and common resting and meeting places, were disrupted by the earthquake. Community and individual needs are satisfied through the provision of social amenities. To illustrate, temples and common resting places provide people with a sense of comfort and belonging. Older people and persons with disabilities in all study districts except Nuwakot and Bhaktapur were concerned about the reconstruction of temples and *chautaris*¹². Batuli Tamang, aged 74, in Sindhupalchowk expressed with sentiment:

"I have somehow recovered from the pain of losing my house. But I feel like crying every time I see the devastated temple. I am sure that the earthquake was the result of the erosion of people's faith in God."

However, this concern was not universal. In Nuwakot, where drinking water was a major problem, older people and persons with disabilities were more concerned about drinking water facilities than the reconstruction of damaged temples. As very few temples were destroyed in the study VDCs of Bhaktapur, religious concerns were least heard there.

Several social protection groups were formed and strengthened in villages with support from the government in collaboration with different NGOs. They include Older People's Associations (OPAs), Disabled People's Organisations (DPOs), single women's groups, and women's development committees. These local groups, along with government, age and disability task forces and focal points, helped older people and persons with disabilities during the disaster to access relief materials, and, to some extent, allowances. The regular functioning of these social networks was badly ruptured following the earthquake. During interview with older people and persons with disabilities, they are found aware of community support groups and networks. In addition, the study revealed that these groups and networks are not institutionally strong and had limited interaction with older people and persons with disabilities.

3.3.1. Wealth

Poor older people and persons with disabilities were more impacted and traumatized by the earthquake than affluent older people and persons with disabilities. Traumatized by multiple tragedies, including the loss of their houses and stored food, poor older people and persons with disabilities were among the worst affected due to their limited ability to cope.

Case study 3: The economic colour of adversity

Hari Maya B.K., a 68-year-old Dalit woman who lives in Gairi-Bisuani-Deupur, Kavre with her grandchildren, used to earn a living from the daily wages she earned by working in a neighbour's vegetable farm. The money she earned was hardly enough to feed herself and her grandchildren even before the earthquake. After the earthquake, she lost this income source altogether and had no choice but to rely on humanitarian aid. She was unable to borrow food from her neighbours either as everyone in the community was facing a similar problem. *"Had there been no external support, I would have perished due to starvation,"* she said, adding that she even experienced suicidal thoughts in the first few days after the emergency. *"I don't have many years to live now and I am worried about my little grandchildren."*

While poor people like Hari Maya suffered in all study districts, wealthy people continued to make ends meet despite the losses they suffered due to the earthquake. They had enough resources, including sufficient food and savings. Study participants in the interview, both older people and persons with disabilities, opined that the well-off family members also easily accessed the aid and were least affected. Poor and those who could not get enough aid support still finding difficult to return to their normal life.

¹²Common resting place in a community

3.3.2. Family and neighbourhood

Older people and persons with disabilities in all study districts coped better when they had a good family support system and significant social assets. Neighbours, strong kinship networks, and political connections were the key social assets that enhanced the coping capacity of people. Recent study showed that the good neighbour support was associated with resilience and while poor was associated with vulnerability (Phibbs, Severinsen, Woodbury, & Williamson, 2014).

Coping was understood to mean being able to overcome the trauma of the earthquake and to gather resources during the relief period.

Talking to family members and engaging in household chores were among the most practiced coping strategies of older people and persons with disabilities. To be able to use these strategies, respondents opined, living in a joint family was much better than living alone or in a nuclear family. Older people and persons with disabilities who lived with their families experienced fewer traumas than those who lived separately. In all study districts, older people kept busy looking after their grandchildren and doing household work, both activities which relieved the stress of the earthquake. Irrespective of how their children treated them, older people said that overcoming hardship brought by the earthquake would have been even harder if they had not been with their families. Ram Bahadur Tamang, Gerku, Nuwakot, who is physically disabled since childhood, got support from the neighbours when he did not get any support from his brother and sister in law. A case below depicts the case of Ram Bahadur Tamang:

Case study 4: Neighbours' support

Ram Bahadur Tamang, aged 48, has been physically disabled since childhood. He cannot speak properly either. He lost his father and mother when he was eight years old. Since then, his younger brother, Krishna Bahadur Tamang, has been taking care of him. During the earthquake, his house turned into rubble and afterwards his brother's attitude towards him changed completely. His brother and his sister-in-law lost their child in the earthquake and are now indifferent to the plight of Ram Bahadur. They built a shelter for themselves but didn't let him share it. He managed to cope with the crisis through the social support he received from his neighbours. He now sits by the roadside in a temporary shelter his neighbours built. They even help him access relief materials like rice and pulse distributed by humanitarian agencies.

The study found that social networks and a sense of community solidarity are still intact in Gorkha District. Here, having good neighbours is perceived as having enhanced respondents' coping capacity. Older people and persons with disabilities who lost their houses and were forced to live in temporary shelters said that it was the company of neighbours that prevented them from experiencing further hardship. Whether in rescuing people from the rubble or providing support in constructing shelters and collecting relief, neighbours were a big help. Older people whose children abandoned them said that their neighbours were their saviours and companions. About the role of his neighbours, Devendra Magar, aged 72 of Arubang, Gorkha, had this to say:

"After my children abandoned me following the earthquake, I had nowhere to go. My sons were busy looking after their wives and children. They acted as if I were not a member of their family. They moved to a rented room but never bothered even to ask if I would come along. All that I had were some clothes and some food to eat. I never missed my wife before but I did after my children abandoned me. I thought it would be easier to kill myself than to suffer alive. But things turned better slowly and gradually. Some young Brahmin boys in my neighbourhood helped me a lot. They built a shelter for me. I turn my empty palms upwards before my neighbours whenever I am helpless and hungry. They never disappoint me, and I hardly feel alone."

Older people were often neglected after the earthquake as younger adults in their families prioritised their own needs. Older people in poor, so-called low caste, and ethnically marginalised families tend to be more vulnerable than those from more advantaged families who have access to resources.

Case study 5: Thankful to God he survived

These days Krishna Bahadur Lopchan, a 73-year-old widower, prays for death rather than life. The father of two sons who left him to the mercy of God after the earthquake, they are now in his opinion just the husbands of their wives. His wife, who was dependent on alcohol and tobacco, was not a companion for him but a source of conflict in his home. The earthquake came as a test of survival for him and an excuse for his wife to drink more. Abandoned by his sons and neglected by his daughters-in-law, all of whom prioritized their own problems, and fed-up with his wife's regular nagging Krishna felt uncared for and fell sick after the earthquake. *"I am not sure what my illness is. The day I saw people dragging injured and dead bodies out of wrecked houses, I started feeling uneasy,"* he recalled.

Despite having had numerous check-ups at health camps and seeking the services of *dhami* and *jhankri* (traditional healers), he was not recovering. Krishna said that when a priest prayed for him on a day he thought was his last, he started feeling better and that now he is well enough to work on his own. *"Maybe prayer, which I had tried earlier too, worked. Now I find solace praying to God, but each day I question why I am still alive. I lost everything in the earthquake, including my family. Now I live on my own and for myself only."* Working in others' fields, he earns his living, but he doesn't find joy in living. The loneliness and pain of being separated from his family haunts him each moment. *"I do not know for whom to live. What is the use of earning if the money is only for eating?"* he pondered. *"God saved me from the earthquake, so I can't die even if I want to. God will grant me death someday. I can only pray"*. His faith in God has grown stronger than ever since he recovered from his illness and he is confident that God will provide him salvation from what he sees as a petty life.

3.4. Factors restricting OPs and persons with disabilities from accessing humanitarian aid

The main barriers that restricted older people and persons with disabilities from accessing humanitarian aid were distance, geography, information, discrimination by their own families, and political influence. These factors were often specific to the areas affected. Humanitarian agencies did not reach those parts of the affected areas that, because of their difficult geography, were not easily accessible. The case of 19-year-old Suntali Magar, a woman with disability, is representative of other similar cases in the study districts and confirms that support did not reach all of the needy disabled persons in the districts.

Case study 6: The reach of humanitarian responders was inadequate

For Suntali Magar of Aruarbang, Gorkha, the earthquake served as a reality check: she became very aware of the limitations of her physical disability not because she had given up on herself but because the relief distribution system was not, in her words, "for people like her." Despite her physical disability she helped her family carry out its daily chores, especially after her brother migrated to the Middle East to work, leaving her, aged parents, her sister-in-law and two children behind. After the earthquake disrupted their daily life, her sister-in-law had to make arrangements for survival. Suntali wanted to help the family but due to her physical disability she could not take care of her aged parents or the young children and could give her sister-in-law a hand by collecting relief. *"Had our house not been destroyed, had the distribution point been closer, or had special assistance been given to physically disabled persons like me, I would have helped my sister-in-law to take care of family and collect relief material. But that was not the case,"* she recalled. *"My inability made me feel guilty about being physically disabled and feel like a burden to the family."* She said that she wished that the relief workers had thought about families like hers.

The relief distribution mechanisms were not sensitive to disability, gender, or age. For example, older people needed warm clothing, mats, mattresses, and waterproof bed covers in order to be warm enough and persons with disabilities needed appropriate assistive devices. None of these materials were provided, a fact suggesting that needs related to disability, age and gender were not fully taken into consideration.

The study found that the discriminatory attitudes of youths and adults in the affected areas were a barrier to the participation of older people and persons with disabilities in meetings and to their ability to get information. During consultations, older people and persons with disabilities revealed that their full participation in meetings was impacted by physical inaccessibility, negative attitudes, and inadequate advance information. Discriminatory beliefs and prejudices were other barriers to their access, participation, and inclusion. Feelings of isolation, lack of autonomy, pervasive discrimination, and negative community attitudes also collectively created barriers to participation in meetings among older people and persons with disabilities. The study also found that communication was a significant barrier to health for older people and persons with disability. Because they lack relevant information, they are often unable to share about their situations, illnesses, pains, and needs.

For older people and persons with disabilities, poor access to finance and wealth were barriers to living independently. Widespread negative attitudes towards them in workplaces, limited accessibility, economic disadvantage, extensive requirements for support, and discrimination created barriers. Attitudinal barriers existing in the society hampered the overall protection and empowerment of older people and persons with disabilities because negative superstitions about them and discriminatory practices towards them effectively resulted in their exclusion from socio-political process and prevented them from getting support after the disaster.

3.4.1. Geography

Geography was a key factor though most humanitarian agencies did not specifically consider it and, in consequence, reached only the most accessible of areas. Consultations with local stakeholders revealed that geography imposed a sort of competition for aid, as those people who arrived at distribution points early laid claim to the most relief goods. Those who could arrive late (because of distance) received nothing. This unfair kind of distribution impacted older people and persons with disabilities particularly negatively. Older people and persons with disabilities living far from accessible areas were least likely to receive relief.

Distance was a key reason that information did not reach people living in relatively inaccessible places like Bhimtar, Sindhupalchowk. In Sangachwok, Sindhupalchowk District, and Dolalghat and Gairi-Bisauni-Deupur in Kavre District, older people reported that information arrived so late that they missed attending health camps and receiving relief materials. In Chitlang, Makwanpur District, persons with disabilities said that they had been deprived of relief materials because distribution points were very far from the village.

3.4.2. Information dissemination

Information dissemination was another factor that was not sufficiently considered during the relief and response phase. Information about support and food aid often did not reach respondents on time and sometimes did not reach them at all. In all study districts, political parties, VDC officials, and NGO workers involved in relief distribution claimed that adequate information had been disseminated and that they took steps to ensure that everyone would benefit. However, the information flow was not systematic enough to guarantee that all older people and persons with disabilities would be reached. Older people and persons with disabilities in Gerku and Ratamate in Nuwakot claimed that, in some instances, information about relief distribution was intentionally passed on to officials' own kin and a limited number of favoured persons and that information did not reach the neediest on time. In fact, sometimes older people and persons with disabilities were informed only after a distribution had taken place.

In one interesting case of the disparities created by the unequal flow of information, some families living in accessible areas in Dolalghat, Kavre were quick enough to split their households simply to lay claim to extra relief aid. Teachers and social leaders said that local political leaders showed bias in their distribution of identity cards (needed to access relief) to the earthquake-affected. In many cases, more than two people from the same family received cards, while in other cases some families were left out altogether. Duplication created a shortage of food that impacted older people and persons with disabilities more than it did other groups. Adults with the luxury of mobility were able to quickly access information and reach distribution points to get materials. While some FM radio stations in the study districts did announce the date, time and location of relief distributions along with other news about the earthquake, older people and persons with disabilities, especially those in Machhegaon, Kathmandu, rarely benefited as they had no radios. Local FM radios were often used to disseminate information about the distribution of relief aid materials.

3.4.3 Reliability of data

There was no up-to-date data on older people and persons with disabilities in the study districts. The study did not find any integrated data based on gender, age and ethnicity developed by the humanitarian responders to provide systematic and inclusive support. The deficiency of data resulted in the duplication of relief distribution and the exclusion of older people and persons with disabilities. It was reported that local data collectors employed by humanitarian responders and NGOs favoured their relatives and friends and that, through favouritism, more than one person in a single family received a family identification card. Such duplication resulted in the tendency for adults to separate from their families after the earthquake. Since data collected was not disaggregated based on age, gender, disability and ethnicity, the specific needs of older people and persons with disabilities were not considered in identifying materials for distribution. The majority of respondents said that materials distributed were neither age- nor disability-inclusive. The real-time gap in up-to-date data was one reason that older people and persons with disabilities were often unable to access support. The study found that no cluster explicitly addressed the issues of older people and persons with disabilities. The tendency to lump together all categories of people as 'earthquake-affected' could not accommodate the real needs and aspirations of older people and persons with disabilities.

In the program districts, HelpAge International distributed an unconditional cash support worth NPR 7,500 to 10,516 older people, transitional shelter materials to 2995 older people and health services to 5290 older people. Older people who received it said that the money was of great help as they were able to spend it on exactly what they needed. However in some VDCs, respondents said that some older people, particularly the very oldest, did not receive money. Older people from Dhadhikot, Bhaktapur, complained that HAI gave money to their neighbours in Gundu VDC but not to them. They also claimed that the money was not distributed to all older people. According to them, while some persons below 60 years of age received money, some older people, including a few in their 90s, were excluded. Likewise, older people of Ratamate, Nuwakot, complained of the 'mismanaged' distribution of cash aid, claiming that many deserving older people had been left out during data collection. Similarly, support from CBM particularly on psychosocial counselling, health camps and surgery was praised by the beneficiaries.

3.4.4. Political influence

Consultations with the wider people revealed that local political leaders influenced humanitarian responders so they would channel aid into their constituencies and towards core voters. Since they would then get credit for the aid, the exercise of such influence had a positive impact on political careers. Older people and persons with disabilities from poor and marginalized families lacked the political power to have their voices heard in many but not all study areas. In some areas, like Sindhupalchowk, local political leaders coordinated well with responders and government agencies to ensure that all the affected people get relief. Political influence seemed particularly biased with respect to the construction of shelters. In

Dolalghat, Kavre, a person with disability alleged that politics played a role in the construction of temporary shelters by the Chaudhary Group and that political parties ensured that their loyal cadres received preference for support. In Gairi-Bisauni-Deupur, Kavre, Chitlang VDC and Thaha Municipality of Makwanpur, and Ratamate and Gerkuh VDCs of Nuwakot, teachers claimed that political influence had created biases in the distribution of relief materials.

Political manoeuvring influenced humanitarian assistance by introducing a bias that did not serve the neediest. This practice was likely a demonstration of power exercise by political parties keen to ensure vote-banks. The result of such injustices was the older persons and persons with disabilities of different castes and classes found it difficult to access sufficient relief materials.

3.5 Degree that humanitarian actors address the needs of OPs and persons with disabilities during disasters

After the earthquake ripped apart the normal lives of people in all the study districts, national and international humanitarian aid agencies provided many relief and support services. The general needs of the earthquake-affected people and communities were numerous. They were categorized broadly as individual or communal associated and divided into sectors, namely, (i) shelter and non-food items (NFIs), (ii) food and cash transfers, (iii) water, sanitation and hygiene (WASH), (iv) education and early childhood care and development, (v) maternal, new-born and child health, and (vi) protection. The most significant impacts of the earthquake were on water sanitation and on livelihoods. In the view of relief workers, individual needs were more pertinent than those of communities.

Older people who had assumed the responsibility for an entire family were particularly burdened. The case of Thuli Bhandari, (Case Study 7) is typical of those older people whose condition deteriorated due to the impact of the earthquake. Responders, however, did not identify such cases of high vulnerability as needing extra support.

Case study 7: Coping with poor eyesight and the burden of schooling a grandson

Thuli Bhandari, aged 81, lives with 12-year-old grandson in Ratamate, Nuwakot. Her house collapsed due to the earthquake. She is the only woman in the house as her daughter-in-law, seeing no means of survival and burdened by the additional responsibility of looking after Thuli, a widow with poor vision, eloped with another man after the earthquake. She is unknown about her son's whereabouts for the last two years now. She is responsible for her school-going grandson and every household chore. To add to her burden, she cannot see well and finds that her poor vision makes it difficult to carry out day-to-day activities. The earthquake made her life miserable.

In her temporary CGI shelter, which is barely three feet high, she shared the bitter experience of staying awake all night when it rained. She expressed her fear about how harsh the winter and windy seasons would be for her and her grandson. *"Had it not been for him, I would wish to die now,"* she claimed, looking at her grandson, who, she says, is the only reason she goes on living. After the earthquake, she received 5 kg of rice and some cash as relief, but since then she has had no other support. She has only one wish before she dies, to educate her grandson for as long as he wants to study. But for now it is a challenge for her just to survive. Unable to reach the relief distribution points, which were usually located half an hour's walk from her shelter, she rarely went herself. Instead, she relies on the mercy of her neighbours. Thuli said that no relief worker had ever delivered a relief package to her shelter.

With very little land on which to grow food and unable to efficiently work in the fields or engage in any income-generating activity she sees little chance of fulfilling her dream. *"I am not sure if I will be able to even keep my grandson alive so that he can, in fact, study."*

Immediate humanitarian assistance came in the form of health camps, food and cash support, and non-food items such as CGI sheets, utensils, clothes, and hygiene-and-dignity kits from the government and humanitarian agencies. Persons with disabilities who had lost their assistive and mobility devices were provided with new ones. People who were in dire need of the most basic of items - food, clothes, and shelter, were provided. Psychosocial counselling was also provided to help earthquake victims deal with the loss and trauma they suffered. Mental health professionals from humanitarian agencies provided this service. However, older people and persons with disabilities opined that the support was not enough.

Apart from a few exceptions, including CBM, HAI, HI and NFD-N, most humanitarian agencies were not very familiar with the issues and challenges faced by older people and persons with disabilities, and even if they were they did not take specific measures to address the needs of these groups.

3.5.1 Water, Sanitation and Hygiene (WASH)

The earthquake had wide impacts on the WASH sector. According to the PDNA (2015), altogether 1,570 water supply systems sustained major damage and 3,663 were partially damaged. 220,000 toilets were rendered unusable as a result of the earthquake.

The heavy losses of WASH infrastructure in Nuwakot and Sindhupalchowk had direct adverse impacts on older people and persons with disabilities. Access to safe drinking water, for instance, was a major problem for these groups in all study districts as the water taps set up by humanitarian agencies in places of common temporary shelters were crowded most of the time and older people and persons with disabilities found it difficult to reach them. Moreover, in a temporary settlement in Thaha Municipality, Makwanpur, an incident of untouchability occurred: a group of so-called high caste people prevented a Dalit with a disability from touching the water tap and humanitarian aid workers had to intervene to avoid conflict.

As the earthquake destroyed a number of regular water sources, it was difficult for people, especially single older women, to travel long distances to fetch water. An older woman from Bhimtar, Sindhupalchowk, shared her distress at having to walk more than 30 minutes to fetch drinking water twice a day.

The wide destruction of toilet facilities resulted in poor sanitary practices in the study districts. Some of the temporary toilets installed by relief agencies failed to address all the requirements of older people and the disabled. The toilets constructed in Gairi-Bisauni-Deupur VDC of Kavre were not disabled-inclusive as none had handrails, enough lights, or latches and wide doors. As a result, persons with disabilities were forced to defecate in open spaces. The temporary toilets situated inside the temporary settlement camps were no less problematic for older people, who found it especially difficult at night when there was no lighting to ensure their safety. The distance between toilets and hand-washing stations made it difficult for older people and persons with disabilities to practice good hygiene.

The absence of proper water and sanitation facilities in and around shelters posed several adversities, including the risk of water-borne communicable diseases, the risks of open defecation, and disputes over the use of water resources.

3.5.2 Shelter and health

The devastating earthquake and its aftershocks destroyed scores of houses in the study districts. A large number of people, including older people and persons with disabilities, were bound to move out of their houses and live in temporary shelters for a few days to several weeks and even months.

As winter winds and cold increased, life in temporary shelters, most of which were made of corrugated galvanized iron (CGI) sheets, tarpaulins and local resources such as bamboo, stones, and mud, grew harsh, especially for older people and persons with disabilities. Kumari Lama, aged 76, of Gerku, Nuwakot, said:

"The temporary shelters were excessively hot during the summer. When it rained, the tin roof made so much noise it disturbed my sleep. Now, in winter, the dew drops falling from the inside of the tin roof wake me up every morning at dawn. I want nights to end quickly and daylight to stay longer. Problems with shelters increased the incidence of health problems and vulnerability.

Older people and persons with disabilities living in temporary shelters experienced asthma, frequent headaches, colds, diarrhoea, fever, and joint pains, among many other physical ailments. According to Bikram Magar, a health assistant in a health post in Gundu VDC, Bhaktapur, upper respiratory tract infections and chronic obstructive pulmonary disease were common among older people and persons with disabilities.

Nhuchhe Maya Maharjan, a female community health volunteer in Dharmasthali, Kathmandu, said that in the case of both older people and persons with disabilities, fear and stress were the most common responses following the earthquake.

Health services were made available in all districts by different agencies in the immediate aftermath of the earthquake, but older people and persons with disabilities said that such response was inadequate and 'hard to access.' Apart from the treatment of physical injuries, psychosocial counselling for older people and persons with disabilities traumatized by the earthquake should have been one of the most important aspects of the support provided. However, the study found that health camps and some initial counselling were conducted in only a few VDCs. Health workers from all study districts said that because the number of patients was "beyond expectation and capacity," treatment areas were crowded and there was little privacy. The scant supply of medicines and other medical supplies was another key challenge.

Long-term stay in a shelter induced the loss of dignity and magnified feelings of helplessness, distress, and depression in older people and persons with disabilities. Such feelings may interfere with their coping capacities and increase their aggression, hyperactivity and impulsivity. The situation can further be deteriorated among the survival of earthquake impact. The recent study showed the suicide rate increased after the 2-years mark of the 2011 Great East Japan Earthquake (Tomata, et al., 2015).

3.6. Institutional barriers to inclusion and good practice

3.6.1 Key barriers

The main barriers to the inclusion of older people and persons with disabilities that the study explored were the lack of disaggregated data, differing priorities, the first-come-first-serve basis of relief distribution, distance, information, mobility challenges, the lack of special provisions for older people and persons with disabilities, age-unfriendly food, negative attitudes of the society, the absence of age- and disability-inclusive infrastructures, and rampant poverty.

That said, humanitarian aid and the distribution of relief post-earthquake did result in some good practices being followed. For instance, the active involvement of VDCs in facilitating relief distributions in coordination with humanitarian actors and in validating recipients' identity in the case of lost identification cards were some good examples. VDC secretaries said that they were also involved in the identification of older people and persons with disabilities. As there were very few programmes that specifically targeted older people and persons with disabilities or gave any consideration whatsoever to age and disability in the distribution of goods and services, the relief and response phase barely addressed the unique problems faced by older people and persons with disabilities.

3.6.2 Good practices

a. Distribution of allowances

The social protection allowances provided by the government to older people and persons with disabilities were provided regularly following the earthquake though their distribution had been irregular beforehand. Those who are eligible have been receiving their allowances every four months as per the provisions of the schemes. In the difficult times triggered by the earthquake, older people and persons with disabilities of all study districts said that the allowance was a very important resource for them to meet their basic needs.

Chitlang VDC, Makwanpur, was a bit different from other villages. It prioritized examining older people and persons with disabilities by providing a separate queue and giving them chairs to sit on while waiting. It also managed to provide privacy to such patients.

b. Specific support to older people and persons with disabilities

HAI and CBM specifically supported older people and persons with disabilities in the study districts. HAI distributed cash and other support to older people and families with older people in the affected districts. This was the only support that was specific to older people, and it did indeed help them to meet some of their specific needs in the immediate post-disaster situation. Even in cases in which other family members within the house took control of the money, the recipient older people got some respect and care from family members for bringing some money home at a time of crisis. Balisara Majhi, aged 76, from Dolalghat shared her feelings:

"My husband used to be a strong man. As long as he was active, our children could hardly say anything to us as they feared him. But as age has made him weak they have started treating us badly. We are not given any respect and we are not treated like parents. I am sure that we would have been kicked out by now if we had not taken that money home. They are just keeping us because we gave them some money for household expenses. The day they feel we cannot be of any help, they may abandon us. I hope we die before that day comes."

Similarly, CBM provided assistive devices, medicines, psychosocial counselling, and curative supports to persons with disabilities and provided food and non-food items to their families. Since most humanitarian actors did not consider the specific needs of older people and persons with disabilities and did not assess the specific impacts on and needs of older people and persons with disabilities, the initiatives of both HAI and CBM were much appreciated by most beneficiaries as well as by various local- and district-level stakeholders.

Political leaders in all study districts except Bhaktapur and Kathmandu claimed that relief material was delivered to the doorsteps of those who could not carry it. Local political leaders serving as key informants claimed that the recipients of this service were largely older people and persons with disabilities. Local teachers and social leaders contradicted these claims, stating that there was no doorstep delivery of relief. The study found that in some very rare cases, older people and persons with disabilities did receive relief at home. However, this was not a widespread practice as some political leaders claimed.

4. Conclusions and recommendations

4.1 Conclusions

This study provides an insight into the situation and needs of older people and persons with disabilities in the post disaster period. Specifically it looked at the impact factors and coping capacities of these groups in getting relief or care. The study also examined the humanitarian responses to their needs in disaster time. The study assessed the impact of the earthquake across three variables: age, gender, and ethnicity. The study found that the needs of older people and persons with disabilities were under-addressed by the humanitarian response and that wealth as well as familial and social support played crucial roles in enabling older people

and persons with disabilities to cope with the impact of the earthquake. Some humanitarian responders, including HAI, CBM, and Handicap International played a key role in meeting the specific needs of older people and persons with disabilities, but in many instances, these groups were forgotten: they were abandoned by their family members and overlooked by emergency relief operations. The physical challenges of older people and persons with disabilities, gaps in the flow of information, political influence, and erosion of social and family support resulted in the exclusion of older people and persons with disabilities from accessing humanitarian aid. The food aid provided during the humanitarian response was not sensitive to age and did not meet the food needs of older people. Sufficient care was not taken to include disability-inclusive shelters and WASH infrastructures. There is still a need for psycho-social counselling as well as for efforts to promote shelter reconstruction and livelihood recovery so that all older people and persons with disabilities can live a life with dignity. The age- and disability-specific services provided during the humanitarian response were often neither adequate nor relevant. Humanitarian responders should now focus on livelihood recovery among older people and persons with disabilities to help them bounce back from the impact of earthquake. They have the right to live lives of dignity in which they can meet with their basic and specific needs, a right that can be fulfilled by ensuring livelihoods. Inclusion of older people and persons with disabilities is necessary for the disaster preparedness and in the training to take immediate and appropriate action in the emergency (Okamoto, Greiner, & Paul, 2015).

4.2 Recommendations

The following recommendations have been formulated keeping in mind the role of government, humanitarian and civil society organizations to support the need of older people and people with disabilities during and/or after the period of disaster. Their application should ensure the systematisation of relief aid management, the inclusion of older people and persons with disabilities, and the mainstreaming of age and disability issues in development plans and programs. These recommendations are based on the six key study questions highlighted above.

4.2.1 Impact of the earthquake on older people and persons with disabilities

a. Psycho-social counselling

- This study found that older women experienced more trauma, anxiety and depression than older men and that women with disabilities were more impacted, again as measured by rates of trauma, anxiety and depression, than men with disabilities. Social stigma, fear and trauma as well as mental stress were prevalent among older women and women with disabilities. The study also found that older persons with disabilities were more severely impacted than adults with disabilities as measure by their scores on trauma, anxiety and depression scales.
- Analysis of the average rates of trauma, anxiety and depression experienced by older people due to the earthquake showed that the prevalence rates of all three conditions were high among women and, in terms of ethnic communities, among Dalits and Janajati. The level of trauma and anxiety was higher among older women than older men in all age groups. Anxiety is a problem and older women suffered more than older men. Scores for anxiety were higher than the clinically diagnostic score of 1.75 among both older people and persons with disabilities in all ethnic communities.
- To reduce the impacts of stress, anxiety and depression and to minimize the fear of another earthquake, humanitarian agencies should provide specific psycho-social counselling and specialist mental health services, in particular targeting older women and women with disabilities.

b. Health services for older people and persons with disabilities

- The study found that older people and persons with disabilities were suffering from multiple health problems like pneumonia, diabetes, and water- and vector-borne diseases. To reduce the health impacts on them, the government and humanitarian agencies should organize outreach health camps in readily accessible locations.

- Despite the fact that there is government policy to make available of 25 essential medicines¹³ at health posts free of cost, older people and persons with disabilities were not having access to this service. Humanitarian agencies should educate the people about this policy provision, especially as some older people said that they have been unable to buy their regular medicines since the earthquake.

c. Allowances and relief materials

- The specific needs of older people and persons with disabilities are different from those of other adults. Because they are more vulnerable than others, too, humanitarian agencies should establish a system for the equitable distribution of relief aid which specifically targets them. The relief aid should be age- and disability-inclusive and the focus should be more on cash than material support. International standards like the Humanitarian Accountability Partnership and Sphere should be considered while managing relief aid. To avoid disputes and to educate people about support provisions, humanitarian agencies should involve social and political leaders.

d. Livelihood recovery

- Poverty affects older people's access to basic goods and services and poses a risk to their survival during a crisis and to their recovery afterwards. There is a correlation between stress and both property loss and livestock loss. The level of stress is higher in older people that lost both property and livestock than among older persons who did not experience such losses. About 95% of respondents reported that they had lost property, 50% that they had lost livestock and 3% that they had lost one or more family members. Food scarcity was another immediate impact of the earthquake.
- Humanitarian agencies should concentrate their efforts on restoring lost livelihoods and design inclusive support for recovery. A nutritious food support program is equally important to ensure that people get an adequate diet. The economic recovery plans for older people and persons with disabilities should be based on local resources, skills and experiences and be well- integrated into the overall recovery programs at the community level. Humanitarian agencies should provide seed grants to OPAs and DPOs to run small-scale livelihood-based enterprises. They should ensure that older people and persons with disabilities are included in recovery programs, especially to ensure the aim of diversification of income.
- Considering how little diversification currently exists in livelihood strategies, OPAs and DPOs should be linked with the programmes of Nepal's Poverty Alleviation Fund and with the Micro-enterprises Development Program wherever appropriate. The goal should be to scale up on-farm- and off-farm-based initiatives. To diversify livelihood initiatives, humanitarian agencies should support climate-smart crops along with market linkages.

4.2.2 Roles of gender, age, disability and ethnicity in determining the impact of the disaster

a. Age- and disability-disaggregated data

- Since the available data was neither up-to-date nor disaggregated based on age, gender, disability, and ethnicity, it was difficult to identify people who needed relief. Numerous real-time data gaps were one factor resulting in the exclusion of older people and persons with disabilities from accessing humanitarian assistance.
- Humanitarian agencies should focus on collecting disaggregated data by developing common and agreed-upon templates and formats for data collection. The templates and formats and database tools selected should be used at the ward, VDC and district levels so that data can be compiled and compared easily. They should also be uploaded on the website of the Ministry of Women, Children and Social Welfare so that they can be used by other agencies during future emergencies. The provision of one window for data collection and update will reduce the number of discrepancies in data and save time and

¹³MoHP distributes 42 types of medicines free of cost from district hospitals, 35 types of medicines from primary health centers and 25 types of medicines from health posts and sub-health posts

resources. Making data disaggregation available will foster transparency and accountability and ensure that resources are leveraged for use by the most affected older people and persons with disabilities.

b. Physical accessibility

- The study found that even though adequate relief was sent to earthquake-affected areas, poor physical accessibility undermined the ability of persons with disabilities to access it. Mobility challenges for persons with disabilities were severe before the earthquake and they only increased afterwards.
- Even though humanitarian agencies provided assistive devices (wheelchairs and tricycles), roads, public buildings (VDCs, health posts, schools, and the like) and means of transport are not always accessible by the disabled, rendering them of limited use to persons with disabilities. Many infrastructures lack disabled-inclusive ramps with handrails or have ramps that are too steep for wheelchair users to use with ease. Humanitarian agencies should advocate for the construction of disabled-inclusive physical infrastructures so that the assistive devices they provide, particularly wheelchairs, can be used. NFD-N and DPOs should take a lead role in promoting advocacy for adopting provisions for disabled-inclusive facilities in new physical infrastructures (specially the transitional shelter and WASH schemes).

c. Social support

- This study found that some older people were abandoned by their family members after the earthquake. To reduce the exclusion of older people from their families and societies, agencies should help them form new OPAs and strengthen existing OPAs. In particular, they should allocate some token supports (cash and materials) for the institutionalization of OPAs, thereby ensuring that OPAs would be developed as social platforms which older people could speak. Right now, a few OPAs are good but the majority need institutional support if they are to be able to influence family and societal decisions.
- In general, relief materials were distributed on the basis of households. HAI was the exception in that it distributed cash rather than materials. In the future, humanitarian agencies should focus on distributing cash along with material support as it is money, not materials that is a crucial need among older people and person with disabilities.
- About 15% of respondents reported that they had not collected relief themselves but that their family members had collected relief materials on their behalf. More advocacy should be required to educate people about the rationale for providing relief at the local level and why older people and persons with disabilities themselves should access relief during emergencies. Accessing relief after an emergency is a fundamental human right.

d. Age-friendly food aid

- Humanitarian agencies provided sufficient food aid to those earthquake survivors whose stored grains were destroyed by their collapsed houses. Agencies should assess the real food needs of older people before providing food aid. Instant noodles and beaten rice, for example, are not the best options for older people because of their age-specific difficulties in chewing hard food.

e. Mainstream age, disability and inclusion-related issues in local development

- To internalize age-, disability- and inclusion-related issues, governmental and humanitarian agencies should mainstream these issues in their administrative, human resource, and gender policies. Age- and disability-mainstreaming agendas should be reflected in their organizational strategies, too. The provisions should be made in such a way that VDCs carry out age- and disability-mainstreaming audits along with MCPM (minimal conditions and performance measures) to ensure that age and disability issues are included in local development.

4.2.3 Coping capacities of older people and persons with disabilities during emergencies

a. Wealth

- The study found that the possession of wealth and resources served as a safety net against some types of adversity that older people and persons with disabilities faced after the earthquake. Wealthy people continued to make ends meet despite the losses they suffered due to the earthquake.
- Governmental and humanitarian agencies should design and implement economic recovery activities and link those activities with locally available micro-finance. Humanitarian agencies should also build linkages among OPAs and DPOs in order to promote resource- and idea-sharing. For persons with disabilities, the emphasis should be placed on the development of relevant skills as well as on input supports and market diversification, all measures that will help ensure the sustenance of income.

b. Family and neighbourhood

- The study found that older people and persons with disabilities coped better when they had a good family support system, social assets, strong kinship networks, and political connections than when they did not.
- To increase solidarity and harmony among older people and persons with disabilities, OPAs and DPOs should be reformed and institutionalized and additional resource support should be provided. To foster social ties, these institutions should be developed as social platforms for periodic review and reflection.

4.2.4 Factors preventing OPs and persons with disabilities from accessing humanitarian aid

a. Geographical locations

- For older people and persons with disabilities, geography is one of several restrictive factors in accessing relief. They were often deprived of relief for no other reason that distribution points were prohibitively far from their villages. The tendency of humanitarian agencies to distribute relief on the very day that distribution was announced also made access difficult for them.
- To ensure that relief aid is accessible to older people and persons with disabilities, governmental and humanitarian agencies should establish points of distribution in previously unreached areas. Providing relief materials for at least two to three days after the message is disseminated would also increase the possibility of older people and persons with disabilities and their families to access relief.
- Governmental and humanitarian agencies should avoid the approach of 'first come first serve' and consider establishing separate queuing systems and providing seating and shade for older person and persons with disabilities who come to collect aid.

b. Information dissemination

- Communication plays an important role in a person's ability to access relief. Because they lacked proper information and an adequate means of communication, many older people and persons with disabilities were not able to access relief. Humanitarian agencies should fix the date, time and venue of the distribution of relief in advance and disseminate it through FM radio stations and local TV channels as well as, with the support of DDCs and VDCs, through the social mobilizers of CBOs and CSOs and ward-level citizen forums. Political parties, VDC officials, NGO workers, CBOs and civil society organizations should also be mobilized to disseminate information.
- The media should report positive stories about older people and persons with disabilities and their families and highlight the crucial roles they play in distributing humanitarian aid.

c. Reliability of data

- The paucity of reliable data on older people and category of person with disabilities makes it difficult to identify their specific needs. The mismanagement of data increases the likelihood of the duplication of relief efforts. Issues with the way distribution conducted were many. For example, some families split up to get more than their fair share of relief and some families were unfairly provided red survival cards due to political influence. Both governmental and humanitarian agencies should expend time, energy, and resources on cross-checking and triangulating data before distributing relief materials.
- Agencies should diversify their communication methods to make sure that messages reach potential beneficiaries efficiently prior to the distribution of relief. Equal numbers of male and female staff from humanitarian agencies should be provisioned to ensure access is gender equal, to prevent the possible alienation of women, and to address any gender-based issues and complaints.

d. Political influence

- Local political leaders play a crucial role in systematizing relief aid, but as the study revealed, on many occasions, the distribution of relief aid was complicated by political disputes. Governmental and humanitarian agencies should educate political leaders about the real spirit of humanitarian norms and values and share information about the specific issues and needs of older people and persons with disabilities in order to reduce politically motivated influence.
- Local political leaders should be involved in the collection, cross-checking, and triangulation of the data gathered from various sources in order to increase their vigilance and to engage them actively in bridging gaps. The role of civil society organizations, too, is crucial, especially in minimizing the unfair influence politics has on distributing relief.

4.2.5 Degree that humanitarian actors address the needs of older people and persons with disabilities during disasters

a. Water, Sanitation and Hygiene (WASH)

- The earthquake disrupted WASH facilities. These should be restored. So that people can access safe-quality water, agencies (governmental and humanitarian) should manage water treatment facilities, including the use of water-purifying drops and tablets.
- To reduce the pain, drudgery and suffering of older women and women with disabilities, age- and disability-inclusive WASH infrastructures (drinking water schemes and toilets) need to be built and their distances from settlements minimized. Such changes will make it easier for older women and women with disabilities to draw water from communal amenities and to use toilets. To ensure the protection of women with disabilities, WASH facilities should be in accessible areas.

b. Shelter and health

- Shelter is a crucial need during emergencies. The study discovered that the quality of shelters provided after the earthquake was far below from the minimal requirements as the majority of humanitarian agencies did not follow Sphere standards.
- While designing transitional shelter support for one or two years before the construction of earthquake-resilient homes, humanitarian agencies should advocate for adopting accessible transitional shelter designs that take into consideration age and disability issues. Humanitarian agencies should advocate that all shelters be age- and disability-inclusive and that they adhere to Sphere standards.
- Shelter should ensure safety and privacy of the occupants. As the prioritized needs, requirements, and aspirations of older people and persons with disability differ from place to place because contexts, social set-ups, and community bonds differ, designs for shelters should be localised and finalized only after consultation with those who will live in them.

4.2.6 Institutional barriers to inclusion and the documentation of good practices

- The mainstreaming of age and disability issues in development plans and programs not only fulfils the human rights of older people and persons with disabilities but also makes it easy to leverage resources and reduce multiple barriers. Agencies should work together to amend existing laws, policies, and strategies as required to reduce barriers. Governmental and humanitarian agencies should strengthen the capacity of OPAs, DPOs and NFD-N for mainstreaming age and disability into development. Furthermore, both types of agencies should mobilize “age and disability task forces” to strengthen the mainstreaming agenda and promote the greater inclusion of target groups in DRR and future emergency responses.
- Governmental agencies should build the capacity of humanitarian agencies and civil society organizations in addressing the inclusion issues of older people and persons with disabilities. There is a need to shift from an awareness-centric approach to a capacity-building-centric approach to boost the confidence of older people and persons with disabilities. In addition, to specifically increase the confidence of older people, agencies should advocate for the property rights of older people and bring about policy changes.
- Humanitarian agencies should support the development of guidelines, tools and techniques for old-age and disability mainstreaming and inclusive development. They should be Nepali context-specific, short, and coherent and address the needs and gaps of older people and persons with disabilities.
- Governmental and humanitarian agencies should advocate for mainstreaming age and disability into disaster preparedness efforts, particularly in the context of the government-initiated comprehensive disaster management program. Humanitarian agencies should advocate to collaborate with governmental agencies at different levels to increase the inclusion of older people and persons with disabilities in disaster risk reduction and disaster response.

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Annex 1: Data analysis

Table 1: Association of trauma, anxiety and depression among older people across various categories

SN	Test: older people	Chi-squared	P-value	Result
	Old age disabled			
1	Association between trauma and old age disability	13.9089	0	Association found
2	Association between anxiety and old age disability	13.5852	0	Association found
3	Association between depression and old age disability	19.3841	0	Association found
SN	Gender	Chi-squared	P-value	Result
1	Association between trauma and old age gender	13.719	0	Association found
2	Association between anxiety and old age gender	48.7251	0	Association found
3	Association between depression and old age gender	7.2959	0	Association found
SN	Family loss	Chi-squared	P-value	Result
1	Association between trauma and family loss	17.2252	0	Association found
2	Association between anxiety and family loss	12.118	0	Association found
3	Association between depression and family loss	0.1155	0.74	Association not found
SN	Property loss	Chi-squared	P-value	Result
1	Association between trauma and property loss	17.7563	0	Association found
2	Association between anxiety and property loss	3.731	0.05	Weakly association found
3	Association between depression and property loss	2.3223	0.17	Association not found
SN	Livestock loss	Chi-squared	P-value	Result
1	Association between trauma and livestock loss	46.7581	0	Association found
2	Association between anxiety and livestock loss	21.4103	0	Association found
3	Association between depression and livestock loss	11.7511	0	Association found
SN	Educational level	Chi-squared	P-value	Result
1	Association between trauma and education level	11.1929	0	Association found
2	Association between anxiety and education	14.9529	0	Association found
3	Association between depression and education	3.4709	0.09	Weak association found

Table 2: Association of trauma, anxiety and depression of persons with disabilities to various categories

SN	Test: persons with disability	Chi-squared	P-value	Result
	Family loss			
1	Association between family loss and trauma	8.522	0	Association found
2	Association between family loss and anxiety	1.65	0.3	Association not found
3	Association between family loss and depression	0.11	1	Association not found
SN	Property loss	Chi-squared	P-value	Result
1	Association between property loss and trauma	3.3992	0.1029	Weak Association Found
2	Association between property loss and anxiety	5.1454	0.028	Association Found
3	Association between property loss and depression	1.7864	0.2544	Association Not Found
SN	Livestock loss	Chi-squared	P-value	Result
1	Association between livestock loss and trauma	8.3803	0.005	Association Found
2	Association between livestock loss and anxiety	5.4067	0.0255	Association Found
3	Association between livestock loss and depression	1.6772	0.2109	Association Not Found
SN	Education level	Chi-squared	P-value	Result
1	Association between level of education and trauma	18.0357	0.0005	Association Found
2	Association between level of education and anxiety	13.0668	0.0005	Association Found
3	Association between level of education and depression	4.6582	0.0515	Weak Association Found
SN	Gender	Chi-squared	P-value	Result
	Association between trauma and gender	5.2907	0.02	Association Found
	Association between anxiety and gender	18.45	0	Association Found
	Association between depression and gender	3.4759	0.06	Weak Association Found

Table 3: Differences in perceived social support between pairs of districts

District pair: OP	Difference	Lower	Upper	p-adj
Gorkha-Bhaktapur	-6.52	-11.24	-1.79	0.00***
Kathmandu-Bhaktapur	-3.11	-7.80	1.58	0.44
Kavre-Bhaktapur	-10.44	-15.21	-5.66	0.00***
Makwanpur-Bhaktapur	-4.43	-9.16	0.29	0.08*
Nuwakot-Bhaktapur	1.10	-3.54	5.74	0.99

Sindhupalchwok-Bhaktapur	-19.10	-23.83	-14.37	0.00***
Kathmandu-Gorkha	3.41	-1.29	8.11	0.33
Kavre-Gorkha	-3.92	-8.70	0.86	0.19
Makwanpur-Gorkha	2.08	-2.65	6.81	0.85
Nuwakot-Gorkha	7.62	2.97	12.27	0.00***
Sindhupalchwok-Gorkha	-12.59	-17.32	-7.85	0.00***
Kavre-Kathmandu	-7.33	-12.08	-2.58	0.00***
Makwanpur-Kathmandu	-1.32	-6.02	3.38	0.98
Nuwakot-Kathmandu	4.21	-0.41	8.83	0.10*
Sindhupalchwok-Kathmandu	-15.99	-20.70	-11.29	0.00***
Makwanpur-Kavre	6.01	1.22	10.79	0.00***
Nuwakot-Kavre	11.54	6.84	16.24	0.00***
Sindhupalchwok-Kavre	-8.66	-13.45	-3.88	0.00***
Nuwakot-Makwanpur	5.53	0.89	10.18	0.01**
Sindhupalchwok-Makwanpur	-14.67	-19.41	-9.93	0.00***
Sindhupalchwok-Nuwakot	-20.20	-24.86	-15.55	0.00***

Table 4: Association of perceived social support of persons with disabilities across the districts

H0: No difference in perceived social support across ethnicity	Df	Sum sq	Mean sq	F value	p-value
Disability data	4	1446	361.6	1.269	0.28
Residuals	1343	382729	285		

Table 5: Association of perceived social support of older person across the districts

H0: No differences in perceived social support across districts	Degree of freedom	Sum square	Mean square	F value	p-value
Old age data	6	10177	1696.2	6.07	4.5E-06
Residuals	366	102286	279.5		

Table 6: Differences in perceived social support between pairs of districts

District pair: PwD	Difference	Lower	Upper	P-Adjusted
Gorkha-Bhaktapur	-10.88	-21.96	0.21	0.06*
Kathmandu-Bhaktapur	-7.67	-18.68	3.35	0.38
Kavre-Bhaktapur	-10.99	-20.98	-1.00	0.02**
Makwanpur-Bhaktapur	-6.10	-17.12	4.91	0.65
Nuwakot-Bhaktapur	-4.29	-13.66	5.09	0.82
Sindhupalchwok-Bhaktapur	-17.90	-28.24	-7.57	0.00***
Kathmandu-Gorkha	3.21	-7.81	14.22	0.98
Kavre-Gorkha	-0.12	-10.11	9.87	1.00
Makwanpur-Gorkha	4.77	-6.24	15.79	0.86
Nuwakot-Gorkha	6.59	-2.78	15.96	0.36

Sindhupalchwok-Gorkha	-7.03	-17.37	3.31	0.41
Kavre-Kathmandu	-3.33	-13.24	6.59	0.95
Makwanpur-Kathmandu	1.56	-9.39	12.51	1.00
Nuwakot-Kathmandu	3.38	-5.91	12.67	0.93
Sindhupalchwok-Kathmandu	-10.24	-20.51	0.03	0.05*
Makwanpur-Kavre	4.89	-5.03	14.80	0.77
Nuwakot-Kavre	6.71	-1.34	14.76	0.17
Sindhupalchwok-Kavre	-6.91	-16.07	2.25	0.28
Nuwakot-Makwanpur	1.82	-7.47	11.11	1.00
Sindhupalchwok-Makwanpur	-11.80	-22.07	-1.53	0.01**
Sindhupalchwok-Nuwakot	-13.62	-22.10	-5.14	0.00***

Table 7: Association between perceived social support and ethnicity

H0: No difference in perceived social support across ethnic groups	Degree of freedom	Sum Square	Mean Square	F value	p-value
Disability data	4	95	23.7	0.078	0.989
Residuals	368	112368	305.4		

Table 8: Logit model and odds ratios for older people dataset on PTSD

Coefficients	Estimate	Std. error	z-value	Pr(> z)	Odds ratio
(Intercept)	6.3209	0.9922	6.37	1.89E-10	556.08
District_Gorkha	-1.575	0.4109	-3.833	0.000127	0.21
District_Kathmandu	-1.2455	0.4115	-3.027	0.00247	0.29
District_Kavre	-1.841	0.4056	-4.539	5.65E-06	0.16
District_Makwanpur	-1.0601	0.4379	-2.421	0.015467	0.35
District_Nuwakot	-2.6815	0.3937	-6.811	9.68E-12	0.07
District_Sindhupalchwok	-2.7294	0.3992	-6.837	8.07E-12	0.07
Num_Initial fear	-0.4968	0.1269	-3.915	9.03E-05	0.61
Family_Loss_Yes	-1.3112	0.4234	-3.097	0.001957	0.27
Property_Loss_Yes	-1.5965	0.7416	-2.153	0.031338	0.20
Gender_Male	0.6018	0.1666	3.611	0.000305	1.83
Significance codes: 0'****' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1					
Dispersion parameter for binomial family: 1					
Null deviance: 1090.74 on 942 degrees of freedom					
Residual deviance: 917.91 on 932 degrees of freedom					
AIC: 939.91					
Number of Fisher scoring iterations:5					

Table 9: Multivariate logistic analysis and odds ratio for the dataset for persons with disabilities

Coefficients	Estimate	Std. error	z-value	Pr(> z)	Odds ratio
(Intercept)	7.92	1.53	5.19	0.00	2759.47
District_Gorkha	-1.62	0.76	-2.13	0.03	0.20
District_Kathmandu	-1.52	0.77	-1.98	0.05	0.22
District_Kavre	-1.12	0.72	-1.54	0.12	0.33
District_Makwanpur	-0.09	0.90	-0.10	0.92	0.91
District_Nuwakot	-1.63	0.70	-2.34	0.02	0.20
District_Sindhupalchwok	-1.22	0.73	-1.66	0.10	0.30
Num_Initial fear	-0.89	0.25	-3.60	0.00	0.41
Cat_Edu_upto_primary	-2.07	0.70	-2.97	0.00	0.13
Family_loss_yes	-2.34	0.99	-2.37	0.02	0.10
Significance codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1					
Dispersion parameter for binomial family: 1					
Null deviance: 329.42 on 260 degrees of freedom					
Residual deviance: 272.43 on 251 degrees of freedom					
AIC: 292.43					
Number of Fisher scoring iterations:5					

Annex 2: Secondary data

Table 1: Populations of OPs and PwDs in study VDCs by district

District	Municipality /VDC	HH	Total	M	F	OPs			PwDs		
						T	M	F	T	M	F
Bhaktapur	Dhadikot	2,688	11,629	5,859	5,770	884	407	477	76	44	32
	Gundu	1,257	5,689	2,735	2,954	623	291	332	58	30	28
	Total	3,945	17,318	8,594	8,724	1,507	698	809	134	74	60
Nuwakot	Gerku	1,421	6,382	2,888	3,494	755	378	377	78	42	36
	Ratamate	8,22	3,793	1,769	2,024	421	224	197	55	29	26
	Total	2,243	10,175	4,657	5,518	1,176	602	574	133	71	62
Gorkha	Aruarbang	998	4,496	1,963	2,533	655	331	324	92	44	48
	Thumi	1,080	4,481	2,000	2,481	572	279	293	59	31	28
	Total	2,078	8,977	3,963	5,014	1,227	610	617	151	75	76
Kathmandu	Macchegaun	872	3,849	1,884	1,965	332	155	177	42	19	23
	Dharmashtali	1,421	6,530	3,250	3,280	489	239	250	104	58	46
	Total	2,293	10,379	5,134	5,245	821	394	427	146	77	69
Sindhupalchowk	Bhimtar	892	4,526	2,084	2,442	566	186	380	89	46	43
	Sangachowk	2,128	9,577	4,311	5,266	893	427	466	107	49	58
	Total	3,020	14,103	6,395	7,708	1,459	613	846	196	95	101
Makwanpur	Chitlang	1,172	5,029	2,237	2,792	652	316	336	142	78	64
	Thaha	4,779	2,1717	10,315	11,402	2,266	1,074	1,192	287	154	133
		5,951	26,746	12,552	14,194	2,918	1,390	1,528	429	232	197

Source: CBS, 2011

Table 2: Populations of persons with disabilities by study district

District	Gender	Total Population	PwDs	Prev. %	Types of disability							
					Physical	Visual	Hearing	Deaf-Blind	Speech	Mental	Intellectual	Multiple
Sindhu	Male	138,351	3,692	2.67	1,515	524	580	68	518	159	89	239
	Female	149,447	2,916	1.95	1,045	497	469	65	396	154	72	218
Kavre	Male	182,936	3,576	1.95	1,312	529	471	132	504	266	106	256
	Female	199,001	3,094	1.55	972	576	496	114	369	225	100	242
Bhaktapur	Male	154,884	1,652	1.07	610	195	266	33	198	160	78	112
	Female	249,767	2,552	1.04	532	230	296	44	233	243	59	215
Kathmandu	Male	913,001	9,144	1.00	3,407	1,917	1,130	147	998	585	324	636
	Female	831,239	7,978	0.96	2,623	1,786	1,238	162	817	552	256	544
Nuwakot	Male	132,787	2,592	1.95	1,002	505	312	49	292	126	91	215
	Female	144,684	2,098	1.45	698	475	278	40	233	133	58	183
Makwanpur	Male	206,684	4,676	2.26	1,738	784	731	57	609	258	185	314
	Female	213,793	3,791	1.77	1,258	769	609	63	468	243	145	236
Gorkha	Male	121,041	3,324	2.75	1,202	538	607	48	410	187	104	228
	Female	150,020	2,945	1.96	864	587	596	44	373	192	84	232

Source: CBS, 2011

Table 3: Number of deaths and injured populations by survey district

District	Deceased			Injured
	Male	Female	Total	
Kathmandu	621	600	1222	1,218
Nuwakot	459	627	1086	662
Sindhupalchwok	1,497	1,943	3,440	2,101
Gorkha	213	230	443	1,179
Bhaktapur	118	215	333	3,052
Kavre	129	189	318	229
Makwanpur	16	17	33	77

Source: PDNA Report, 2015

Table 4: Conditions of house by district

District	Condition of house	
	Fully destroyed	Partially destroyed
Kathmandu	27,640	33,215
Nuwakot	30,000	15,000
Sindhupalchwok	44,310	18,991
Gorkha	44,607	13,236
Bhaktapur	7,000	2,000
Kavre	30,000	18,545
Makwanpur	363	497

Source: PDNA Report, 2015

Annex-3: Sample size of older people and person with disabilities

Proportionate random sampling was used to find out the samples in each district. For the calculation the sample size was derived following the process below.

According to the National Census (2011) there is 1.9% person with disability in the country meanwhile the population share of older person is 9.48%.

Step 1: Defining sample size of older people and person with disabilities in each District

Since the Population for research were only older people and person with disabilities, the total sample (215) was then proportionately divided as per the national census.

That is,
 $1.94x + 9.48x = 215$

Hence $x = 18.56$

Therefore the total samples of older people in each district $= 9.48 * 18.56 = 176$ (approx.)
And the total sample population of person with disabilities in each district $= 215 - 176 = 39$

Step 2: Defining Sample size in each VDC

Sample size in each VDC was defined proportionally with respect to population of older people and person with disabilities in each VDC. In so doing the population of male and female was equally considered to ensure the representation of all.

Step a: find the sample size of older people and person with disabilities males and females in each district

% of OPs male sample = total population of male OPs in Gorkha / total population of OPs in Gorkha * 100
 $= 610 / 1227 * 100 = 50$ (approx.)

Sample size of older people male = % of OPs male sample * total OPs sample size
 $= 0.5 * 176 = 88$

Similar method was followed to find out total person with disabilities male and female sample size

Step b: Find the sample size of older people and person with disabilities males and females in each VDC

% of older people male sample = total population of male older people in Aaruarbang / total population of older people in Gorkha * 100
 $= 331 / 610 = 0.54$

Sample size of older people male = % of older people male sample * total older people male sample size
 $= 0.54 * 88 = 47.52 = 48$ (approx.)

Similar method was followed to find out total person with disabilities male and female sample size

Same method was followed to find out the sample size of older people and person with disabilities in all VDC with respect to male and female of each group.

Annex-4: Additional figures

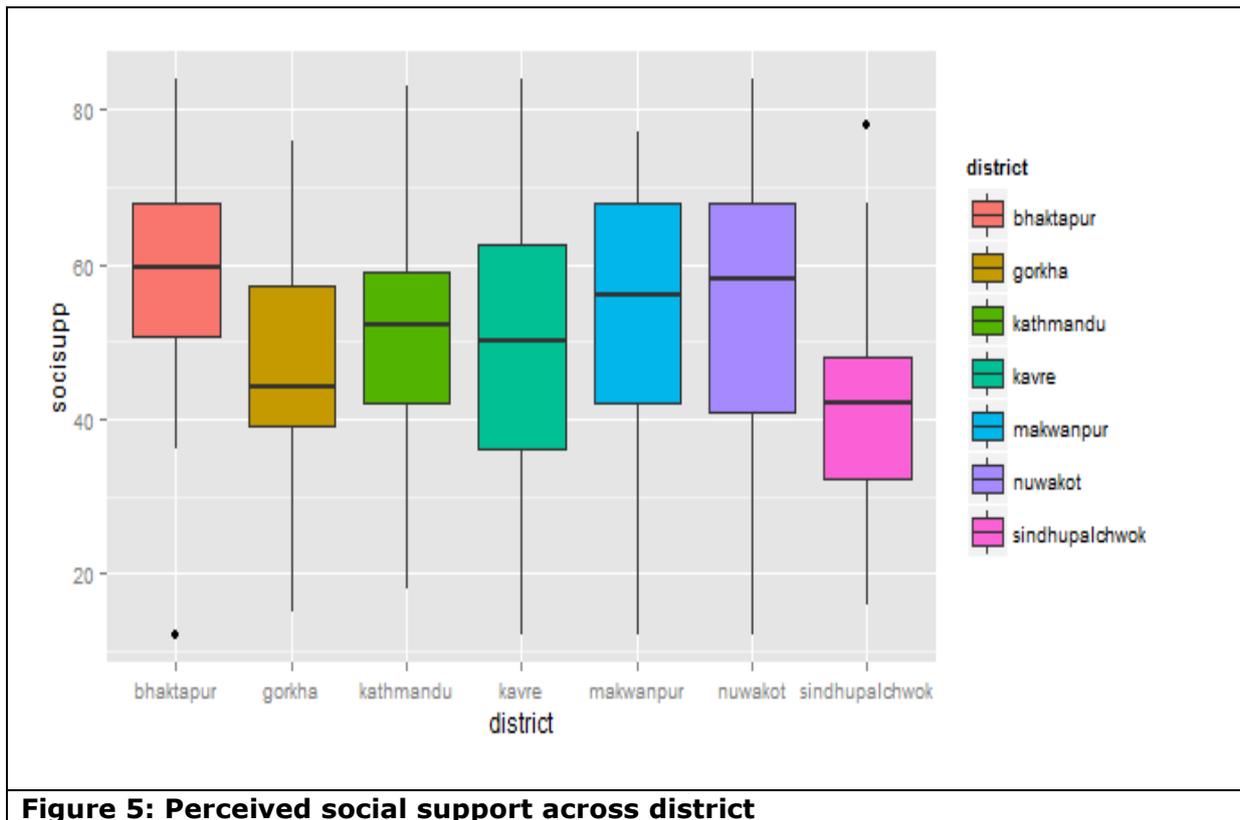


Figure 5: Perceived social support across district

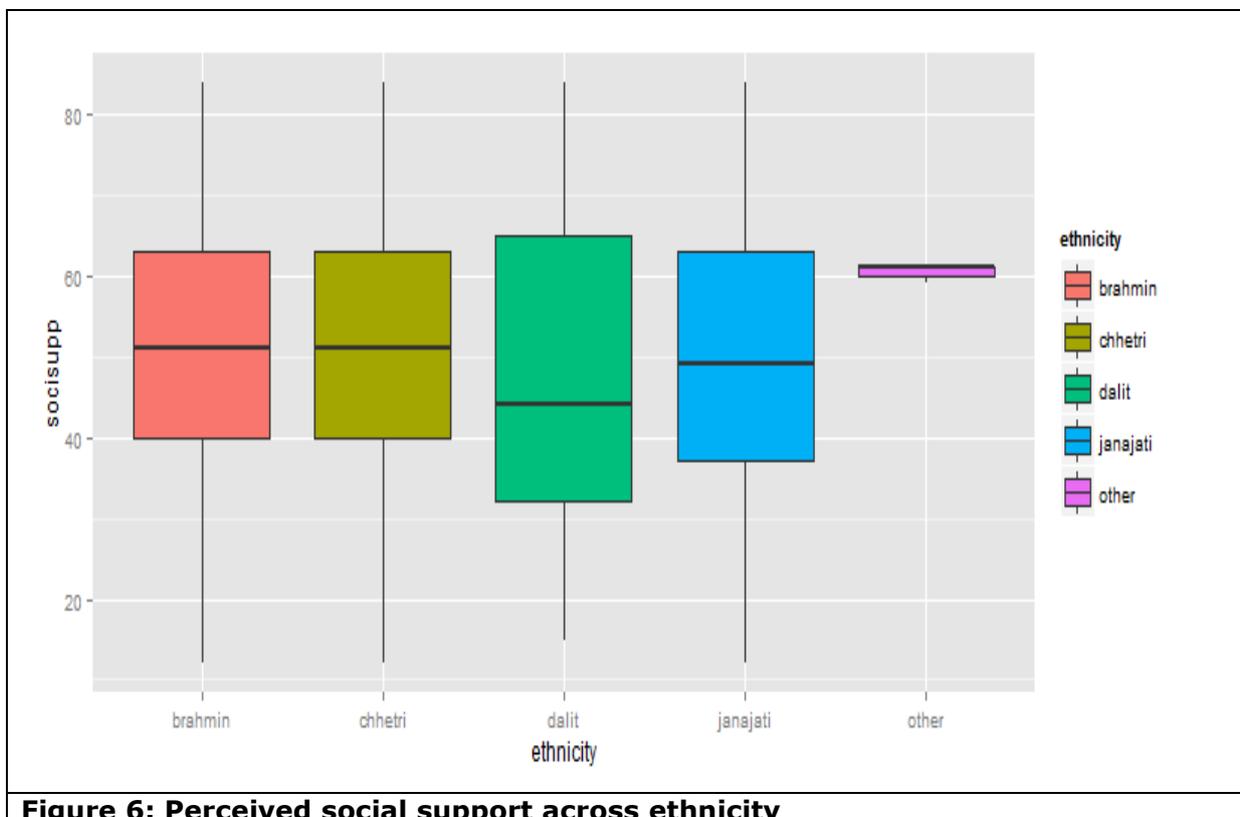


Figure 6: Perceived social support across ethnicity

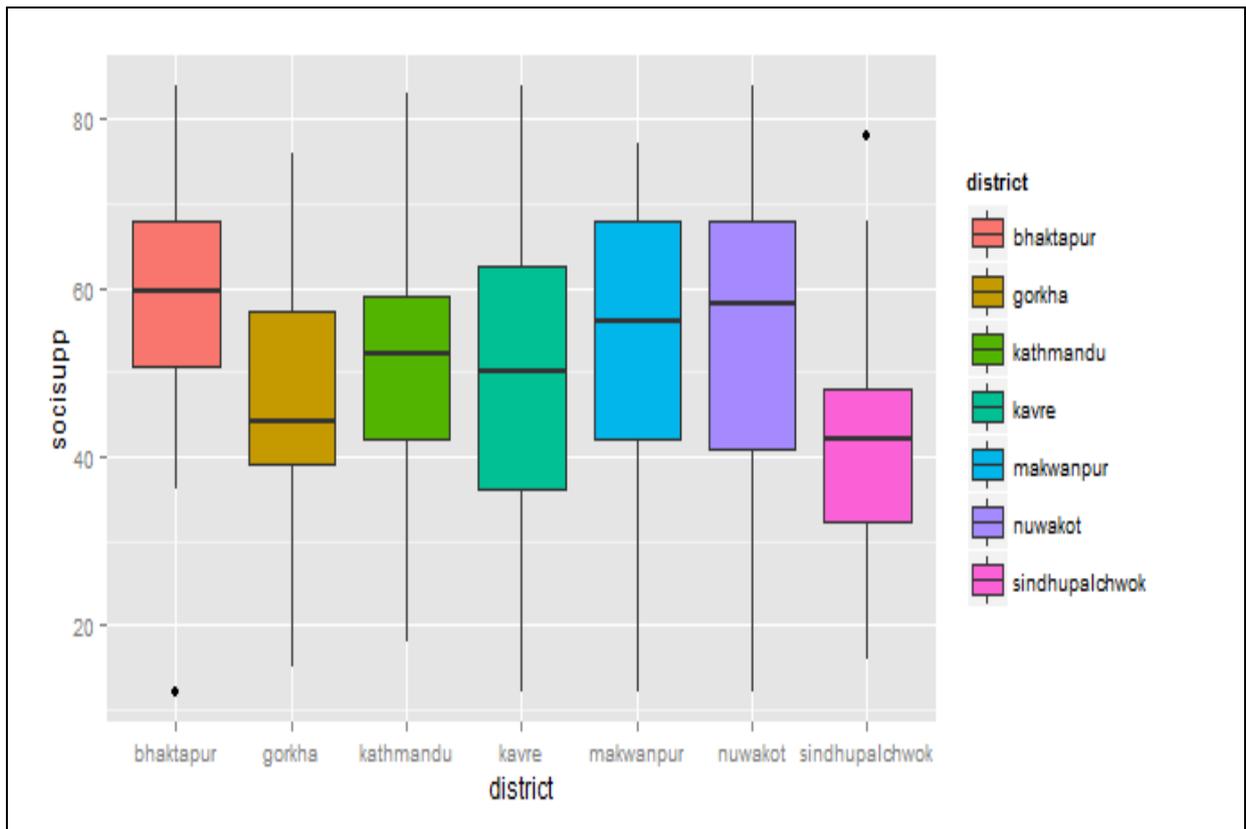


Figure 7: Perceived social support across districts

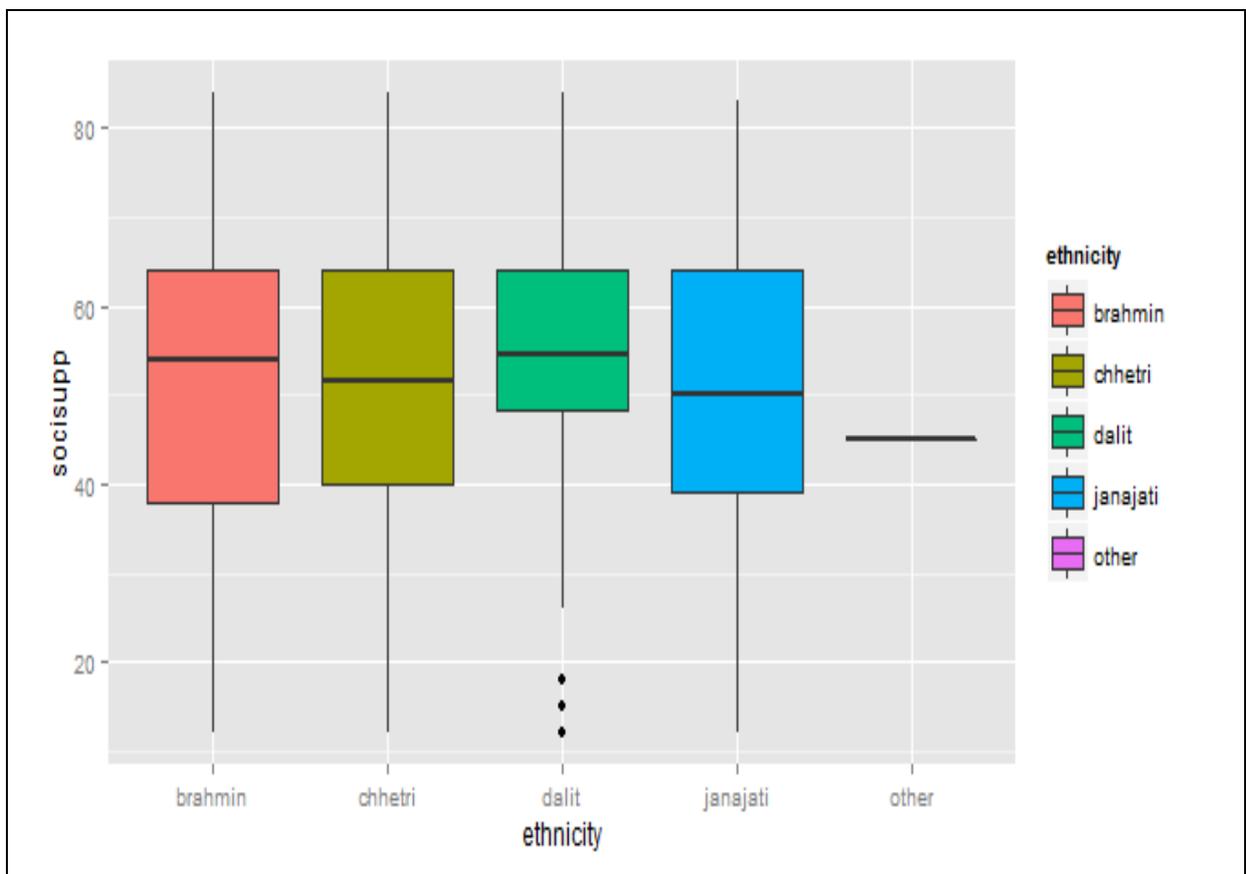


Figure 8: Perceived social support across ethnicity