

**POST DISASTER RECOVERY AND
DEVELOPMENT: CASE STUDY OF 2005
EARTHQUAKE DISTRICT MANSHERA, KPK**



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A dissertation submitted in partial satisfaction of the requirements for the degree
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**PAKISTAN INSTITUTE OF DEVELOPMENT ECONOMICS,
ISLAMABAD**

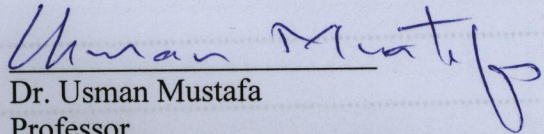
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TABLE OF CONTENTS

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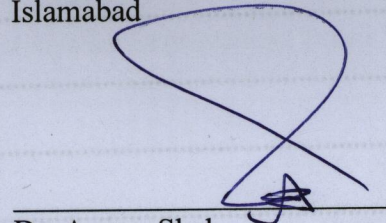
This is to certify that this thesis entitled: “*Post Disaster Recovery and Development: Case Study of 2005 Earthquake district Manshera, KPK*” submitted by Rameez Khan is accepted in its present form by the Department of Development Studies, Pakistan Institute of Development Economics (PIDE), Islamabad as satisfying the requirements for partial fulfillment of the degree in Master of Philosophy in Development Studies.

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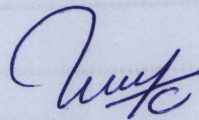
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TABLE OF CONTENTS

LIST OF TABLES	iii
LIST OF FIGURE	iv
ACKNOWLEDGEMENTS	v
ABSTRACT	vi
Chapter I.....	1
INTRODUCTION.....	1
1.1. Statement of Problem	2
1.2. Key Terms	3
1.2.1. Disaster:	3
1.2.2. Reconstruction	3
1.2.3. Rehabilitation.....	3
1.2.4. Disaster Preparedness	3
1.2.5. Post Disaster Development.....	4
1.3. Study Objectives	4
1.4. Research Question.....	4
1.5. Significance of Study	5
Chapter II	6
REVIEW OF LITERATURE.....	6
2.1. Literature Review	6
2.1.1. Recovery and Development after Disaster	6
2.1.2. Reconstruction after Earthquake	9
Chapter III.....	12
RESEARCH METHODOLOGY	12

3.1. Theoretical Framework	12
3.2. Data Collection.....	13
3.2.1. Structured Questionnaire	14
3.2.2. Focus Group discussion (FGDs).....	14
3.3. Unit of Data Collection	14
3.4. Sampling.....	14
3.5. Locale of Study	15
Chapter IV	16
RESULTS AND DISCUSSION	16
4.1. Relief Operation in Earthquake.....	18
4.2. Educational Performance Before and After Earthquake	22
4.3. Facility at School before and after Earthquake	25
4.4. Health Sector Performance before and after Earthquake	27
4.5. Infrastructural and Communication System Improvement before and after Earthquake.....	31
4.6. Reconstruction after Earthquake	36
4.7 Focus Group Discussion:	41
4.8. Conclusion.....	46
REFERENCES.....	48
APPENDIX A	52
THANK YOU	56

LIST OF TABLES

4.1. Distribution of Respondents with Respect to Socio Economics Variables	16
4.2. Awareness about First Aid.....	18
4.3. Relief Provided in Earthquake	20
4.4. Migration after Earthquake	21
4.5. Educational Performance before Earthquake.....	23
4.6 Educational Performance after Earthquake	24
4.7. Facility at School before Earthquake	25
4.8 Facilities at School after Earthquake	26
4.9. Patient Visits to Health Centers	27
4.10. Patient Visit to health Centers after Earthquake	28
4.11 Facilities at Hospital before Earthquake	29
4.12. Facilities at Hospital after Earthquake.....	30
4.13. Infrastructural Improvement before Earthquake.....	32
4.14. Infrastructural Improvement after Earthquake.....	33
4.15. Communication System before Earthquake.....	34
4.16 Communication System after Earthquake	35
4.17 House Damaged in Earthquake.....	36
4.18 Compensation for Damage House	37
4.19 Structure of House	38
4.20 Construction of House	39
4.21. After Shock Impact on House.....	40

LIST OF FIGURE

4.1. Awareness about First Aid.....	19
4.2 Awareness about First Aid Region Wise (Plain and Hilly).....	19
4.3. Relief Provided in Earthquake	20
4.4. Migration after Earthquake	22
4.5. Children Enrollment.....	23
4.6 Children Enrollment after Earthquake	24
4.7. Facility at School before Earthquake	25
4.8 Facilities at School after Earthquake	26
4.9. Patient Visits to Health Centers	27
4.10. Patient Visit to health Centers after Earthquake	28
4.11 Facilities at Hospital before Earthquake	29
4.12. Facilities at Hospital after Earthquake	31
4.13. Infrastructural Improvement before Earthquake.....	33
4.14. Infrastructural Improvement after Earthquake.....	34
4.15. Communication System before Earthquake.....	34
4.16 Communication System after Earthquake	36
4.17 House Damaged in Earthquake.....	36
4.18 Compensation for Damage House	37
4.19 Structure of House	38
4.20 Construction of House	39
4.21. After Shock Impact on House.....	40

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ABSTRACT

In this research we inspect that after disaster how much community is satisfied with relief and rescue operation, satisfaction about post disaster development and the reconstruction of their houses. Questionnaire is developed to attain the available information from the community and descriptive analysis was done. The results are compatible to theoretical prediction. The study finding discloses that the community is satisfied with relief and rescue operation by military. The findings also explore that the community are satisfied with post disaster development in education sector and in infrastructure but not satisfied with health facilities provide by the government. Community is satisfied with the post disaster reconstruction and finding explore that government give design to reconstruct the house but the community not constructed house on that design because of the low compensation amount.

Key Words: Rescue, Relief, Reconstruction, Post Disaster, Development, Community.

Chapter I

INTRODUCTION

Natural disasters like earthquake, typhoon and tsunami always do a high degree of damage especially in densely populated areas, where hundreds of people die or affected. The Centre for Research on the Epidemiology of Disasters (CRED) defines natural disaster as “a situation or event which overwhelms the local capacity, necessitating a request to a national or international level for external assistance; an unforeseen and often sudden event that causes great damage, destruction, and human suffering”. According to CRED an event is said to be disaster if it meets the following conditions:

- More than 10 people killed.
- More than 100 are reported to be affected.
- Declaration of emergency.
- Call for international assistance.

Over the last three or four decades, rate of natural disasters increased all over the world especially Asian countries experienced more disasters as compared to other countries. The people living in Asia-Pacific region were three times more affected by a disaster than the people living in Africa, five times more than the people living in Caribbean and Latin America and sixty seven times more than the people living in Europe ESCAP (2013).

Natural disaster like earthquake results in more fatalities than any other disaster. In last decade Asia region experienced some worst earthquakes like Gujrat Earthquake in 2001, Indian Ocean Tsunami in 2004, Kashmir Earthquake in 2005, Sichuan

Earthquake in 2008 and Japan Earthquake in 2011 resulting in 0.45 million deaths and more than 30 million affectees.

On October 8, 2005 an earthquake of magnitude 7.6 hit Kashmir and Northern areas of Pakistan and considerable damage was done to life and property of the people. More than 90,000 people lost their lives out of which 19,000 were children and most of their fatalities were in schools. Around 140,000 people injured, 5 million families were affected, and 780,000 buildings and 17,000 schools were destroyed or damaged beyond repair. Hospitals and health care centers were totally destroyed or severely damaged in earthquake (National Disaster Management Authority).

1.1. Statement of Problem

Rescue, relief, recovery and rehabilitation are four important factors in disaster management. These four factors are implemented in stages right after the disaster. Rescue is to be carried out within 3 days of the disaster and relief operations are carried out till a week after the disaster. Recovery and rehabilitation processes are carried on till 5 to 10 years.

After passing 10 years of Kashmir Earthquake it is enough time to measure whether the reconstruction and rehabilitation process is completed or not. It is important to find out that this whole process of reconstruction is according to government instruction especially through ERRA or NGO's and what is the community involvement in this process. Furthermore, it is necessary to explore how much the area developed, how much performance of education and health sector improved and also the betterment in infrastructure after earthquake. As the government declared this whole region vulnerable, and disaster may occur in future in this region, it is important to find out that, have the government or Non-Government Organization

(NGO's) trained the communities for disaster preparedness measures to cope up with disaster in future?

1.2. Key Terms

1.2.1. Disaster: Disaster refers to a sudden accident that causes great damage to infrastructure or loss of life. In 2005, 7.6 magnitudes earthquake hit the Northern areas of Pakistan and Azad Jammu and Kashmir (AJK). In this earthquake district Manshera was badly affected and one Tehsil of Manshera was declared red zone, where reconstruction and rehabilitation was not allowed by Government.

1.2.2. Reconstruction: Reconstruction refers to the construction of disaster proof houses which were destroyed. In 2005 earthquake almost 70% houses were totally and partially damaged in district Manshera. Government of Pakistan formed ERRA with a motive "Build Back Better" on 24 October 2005. This study will analyzed that the construction of houses after earthquake is according to ERRA plan and they build safer houses than the previous ones.

1.2.3. Rehabilitation: Rehabilitation is one of the component of disaster management. When a disaster struck an area, people move out of the area due to infrastructure damage and destruction. This process is followed after the recovery period and is carried out in long term.

1.2.4. Disaster Preparedness: Disaster preparedness refers to step taken to minimize the effect of disaster and the coping mechanism. Generally in vulnerable or disaster prone areas community is trained to cope up with disasters in future. This study results cover what strategies are adopted by the community to cope with disaster in future.

1.2.5. Post Disaster Development: It refers to the development process carried out after disaster. When a disaster occurs, the infrastructure in that specific area is totally destroyed. This study explores the post disaster satisfaction of community about development, especially in school and health performance and also infrastructural improvement.

1.3. Study Objectives

The overall objective of the study is to find out if reconstruction process that is completed in District Manshera is according to government plan and the communities also know the coping mechanism for future disaster. This study finds out the post disaster satisfaction about development especially in school and health sector.

Whereas, the specific objectives are as follow:

- i. To know the status of recovery process after earthquake of 2005 in District Manshera and households coping mechanism.
- ii. To find out the level of satisfaction of community with post disaster development, especially the performance in educational and health sectors.
- iii. To measure the role of different organization i.e. NGO's, INGO's, and ERRRA in reconstruction process after earthquake.

1.4. Research Question

- i. Is the community involved in recovery and rehabilitation process and what is the coping mechanism of communities about disaster preparedness?
- ii. Has the performance of educational and health sector improved after disaster and how much did the infrastructure improve?
- iii. Has the Reconstruction process after earthquake been carried out according to ERRRA plan or by the traditional way?

1.5. Significance of Study

This study is very important to highlight the role of community participation in recovery and development process after the earthquake. This study highlighted level of satisfaction of community regarding health and education sector performance after the earthquake and improvement in the said sectors. This study also highlighted the preparedness of community for disaster if any disaster comes in future.

Chapter II

REVIEW OF LITERATURE

2.1. Literature Review

Disasters are natural phenomena which cannot be stopped by the human beings but they can somehow take pre-safety measures in order to minimize its impact. As for Disaster is concerned, it affects human beings as well as the whole infrastructure and properties of the society. In post disaster era the main issue is the development process or the recovery toward the sustainable society.

2.1.1. Recovery and Development after Disaster

Berry and King (1998) in their study argued that the lack of education and the awareness in the society lead to the loss of lives as well as the infrastructure of the society and by giving awareness and knowledge about disaster they believe, societies and communities reduce the losses. King (2000) argued that in disaster preparedness or awareness the communities had to face the issues like the problem of understanding the relative information and they are not aware from the disaster preparedness techniques especially in the rural areas. For this the Government and the civil society has to take steps to educate the people about the disaster preparedness so that they could easily cope up with the disaster.

Pandey and Okazaki (2005) explain the different case studies of the disaster effected areas and concluded that community based organization had to play a positive role to communicate and educate the people about the disaster preparedness. It is also included that by empowering the communities or involving those in the decision making process it would lead to sustainable and fast recovery of that affected society.

Smilde-van den Doel, Smit et al. (2006) studied the performance of the school children and their social emotional behavior after firework disaster in Netherlands. They found that initially after the disaster the school performance of the children was effected especially the girls but after three or four years they are at their previous level and in some cases it improved from past. In post disaster time student's social behavior changed and their behavior became regressive and their participation in the community decreased.

Shaw and Sinha (2003) argued that the sustainable recovery of societies is possible only if there would be the proper coordination between the different stake holders. Post disaster management would be successful by the provision of technical skills, co-ordination of community with Government and community participation during rescue relief and rehabilitation respectively. And major success of recovery process after Gujrat earthquake is involvement of community in every decision process of relief, recovery and rehabilitation. Nakagawa and Shaw (2004) had done the comparative study of the two earthquake affected areas Gujrat and Kobe and their recovery process. They argued that in different areas of Kobe and Gujrat where the social capital among the community is strong faster the recovery process took place. Likely the *Mano* and *Sohni* community in Kobe and Gujrat respectively show that social bonding between the peoples in both communities is strong and as a community participate in the development and recovery process due to which they did the faster recovery after the earthquakes than the other communities.

Bolin and Stanford (1998) explain that community based organization (CBO's) and non-government organization (NGO's) have a positive and a significant role in the recovery process of the Northridge earthquake affected peoples. In this earthquake the

federal government organization are failed to help the vulnerable community because they are focusing the middle income people and they are applying their own decision according to their preferences but on the other hand the CBO's and NGO's are in a direct link with the vulnerable community and they are doing the development or rehabilitation by involving the community. In this earthquake CBO's and NGO's helped the vulnerable community more than the government agencies like *Federal Emergency Management Agency (FEMA)* and *Small Business Administration (SBA)*. Turner, Kasperson et al. (2003) argued that planning of reconstruction and recovery is main part of disaster management which represents proactive adjustment and comprehensive response during the disaster. Ge, Gu et al. (2010) explained the case study of 2008 Sichuan earthquake in which post disaster period government implemented two plans first is overall recovery and reconstruction plan and second is urban city plan and both the plans were run by the government officials. The recovery planning is effective in term of technical support, relief assistance and in emergency response but in long run plans having lack of consistency and not addressing the local demand because in long term plan there is lack of co-ordination between Government officials and local people. Rubin and Barbee (1985) argued that communities can make recovery after disaster after adopting these strategic factors: first the local government has the abilities to act, means that they have technical knowledge and organizational capabilities to cope with disaster. Second is reason to act means that local government has awareness and knowledge for disaster recovery so that they can easily planned short term disaster recovery plans. Third but not least is political awareness, if there will be political awareness faster the recovery and development process. James (2008) argued that Indonesia is the disaster prone country in the world and after 2004 tsunami Indonesian government had focused toward disaster

preparedness by amendment in its constitution and new ministry disaster management was set up. This ministry had its own budget and mandate overall the country. Some other steps were taken by government is the capacity building of the institution to cope with upcoming disaster by giving disaster resistance information and technologies and international NGO's giving training to communities and students for disaster preparedness and to cope up with disaster in future. Norris, Stevens et al. (2008) argued that after Asian Tsunami 2004 and Hurricane Katrina 2005 government shifted their preferences toward disaster preparedness, so that the physical loss and fatalities had to be reduced. For this disaster mitigation act was introduced through which main focus shifted toward disaster preparedness by empowering the community and involving them in every step of mitigation.

WCDR (2005) Reported due to uncertainty of job in disaster organization for employee in Pakistan, this will lead toward the less interest and efficiency of employee in disaster management plan. According to WCDR the national disaster plan was made in 1974 for rescue and relief operation in Pakistan but this plan was never finalized by government. This delay in plan leads to lack of co-ordination between the concerned organizations.

2.1.2. Reconstruction after Earthquake

In post disaster recovery urban planning has a key role, so we can't leave the urban planning to manager in relief operation. Everyone like architects, engineers, military and development organization has to play a vital role for sustainable recovery of community Olshansky (2006). The importance of urban area recovery because of the community bread and butter depend on the urban area. For recovery the government agencies role is crucial and they have the coherent strategy for post disaster recovery

of the community. Hicks & Pappas (2006) Argues that like many development countries Pakistan does not have develop the disaster preparedness plan and Pakistan also have not the IDP's Policy, so it's difficult for organization to move or resettle the people after disaster. That why Pakistan has to suffer a lot in disaster relief operation in 2005.

After 1999 earthquake in turkey the author argues that 66% of the community are satisfied by the reconstruction of new houses because of better design by government. They also satisfied that government monitor the construction process. On the other hand 34% stated the present home can be better than the previous if government keeps us in decision making Tas, Cosgun, & Tas (2007). UN (2005) reported that despite pressure from the UN organization government has not develop the re location policy for affected people of 2005 earthquake. The government organizations are working on a policy in which the people living at higher attitude have to re settle in plain areas. But the drawback of this policy is that compensation amount given for destroyed houses will be given to community at the point of origin. That why people prefer to stay at his own place rather than going to safe place or plain areas.

Stephen (2012) argues that after the earthquake in Chile the government developed a complete framework for the reconstruction of the affected area. They developed a three phase strategy, firstly they estimate the total loss of infrastructure, secondly they plan and co-ordinate with the concerned organization and thirdly they reconstruct the safe infrastructure in urban town according to their plan. Lyons (2009) explores that in 2005 earthquake in Indonesia most of the houses were destroyed. Due to huge funding to NGO's by the donors they turn their aim from emergency to reconstruction. Most of INGO's reconstructed the house for the community and

rehabilitate them but due to lack of participation of community in construction process and planning. Community was not satisfied with houses constructed by NGO's. the paper discuss the cultural aspect and participation of stake holder must be incorporate for reconstruction of sustainable houses.

Drabek (2012) showed the relationship between the disaster management and exposure to disaster, if communities are more exposed to disaster then they show more participation in disaster planning and management and vice versa. Pearce (2003) argued that in recent era the focus of disaster management and planning has shifted to hazard mitigation. For this sustainable mitigation community planning is the most important factor and for the community planning community had to involve in decision making process and also give awareness about disaster preparedness. Portolo valley case study was the best example of community participation with disaster management authority lead to sustainable mitigation. Fiedrich, Gehbauer et al. (2000) argued that past experiences of emergency management show in first three days rescue and relief operation had to be done and carried out these operation decision to utilization of limited resource is very important, to minimize the fatalities and more people to be rescued.

Chapter III

RESEARCH METHODOLOGY

A detailed study has to be conducted in order to find out the coping mechanism of community against the disaster. This study attempted a comparative study among the Earthquake affected areas and comparison of hilly and plain regions in Tehsil Balakot. The research design is naturalistic experimental design in which comparative study was done. In this study, primary data is used which is collected from Tehsil Balakot by using data collection tools like questionnaire and focus group discussion (FGD's) and descriptive analysis of data is done.

3.1. Theoretical Framework

Over the period of three decades' paradigm of disaster management had shifted from top-to-bottom approach towards bottom-up approach. In top-to-bottom approach all the projects are usually planned and implemented by government or non-governmental organizations without consent of community. The issues that have been experienced with the top-to-bottom approach are the success rates of the project; the desired results, based on the experiences of almost two decades, have not been satisfactory and most projects have failed in the implementation stages. In bottom-to-top approach, unlike the top-to-bottom approach, community participates in every stage of project and there are successful projects which are implemented with the consent of community.

Nakagawa and Shaw (2004) argued that Gujrat earthquake was one of the best case studies for community participation in rehabilitations and recovery. In recovery and reconstruction process communities which have strong bonding amongst the people of their community experienced quick recovery. Especially the *Mano* and *Sohni*

communities in Japan and India which had strong bonding between people and strong leadership made speedy recovery.

Community participation has now become essential in every part of disaster management, whether it is rescue, relief, recovery or rehabilitation. The experience of the India and elsewhere in the world for successful community driven rehabilitation has necessitated the community involvement in implementation of the rehabilitation projects. This basic and simple rationale behind the community based projects in rehabilitation is that the communities know their problems, the strengths and weaknesses of their communities and geographical locale, therefore, the success of the government and non-governmental organizations' projects are strongly associated with the community involvement for implementation of the project.

Reconstruction and rehabilitation process have been completed in district Manshera after 2005 earthquake and this study has tried to explore how the communities participated in the whole process of rehabilitation. The study has further assessed the level of participations of the communities in project implementation process. Furthermore, this research has also studied and taken into account the disaster preparedness knowledge of communities in post-disaster era and how much are they ready to deal with similar disasters in future.

3.2. Data Collection

For Data collection structured Questionnaire was developed to attain the information from the community and also two Focus group discussion conducted in affected areas to dig out more information which could not be attained from Questionnaire

3.2.1. Structured Questionnaire

Questionnaire was distributed among the local community through the selected sample. In questionnaire we attained the information from the community through a selected sample from selected villages or cluster of District Manshera.

Questionnaire was distributed among selected villages or clusters Tehsil Balakot to dig out information about health and educational performance after the earthquake and how much the infrastructure has improved.

3.2.2. Focus Group discussion (FGDs)

Focus group discussion is conducted in selected villages of hilly and plain areas of Tehsil Balakot. FDGs conducted to dig out the information from community which was not covered in questionnaires. The reason for conducting focus group discussion was to get the mixed information from different group of people which was not be attained through structured questionnaire.

3.3. Unit of Data Collection

The units of data collection were the households of the Tehsil Balakot and its Villages included in the sample. Head of the family was requested to provide the information in the questionnaire.

3.4. Sampling

Total population of District Manshera is 1152839 according to 1998 population census of Pakistan. Multistage stage cluster sampling was done from which i selected the affected tehsil and from that affected tehsil we randomly selected the villages or cluster. Clusters are selected in such a way that the both plain and hilly areas were to covered and get the mix views. Three villages from the plain areas were selected and

two villages selected from hilly areas simple randomly. Each cluster consists of 30 households and total sample size was 150.

3.5. Locale of Study

In 2005 earthquake the most affected district of Northern areas was district Manshera. The population of district Manshera is 1152839 according to 1998 census. District Manshera is divided into three Tehsils and 56 union councils. In district Manshera Tehsil Balakot was badly affected. Balakot city was most affected in 2005 earthquake and the major casualties in earthquake are from Balakot. This study was conducted on Tehsil Balakot. In this study cross comparison of selected villages of hilly area and plain area before and after earthquake have been done in Tehsil Balakot Earthquake 2005.

Chapter IV

RESULTS AND DISCUSSION

This chapter shows the result of the data which we collected from the Tehsil Balakot. Collected data is analyzed through descriptive analysis. In this we do the comparison of data between hilly and plain region of Tehsil Balakot and comparison is done through tables, graphs and charts

Table 4.1: Distribution of Respondents with Respect to Socio Economic Variables

Variable	Valid	Frequency	Percent	Cumulative Percent
Age	20-30	12	8.0	8.0
	31-40	35	23.4	31.4
	41-50	44	29.3	60.7
	50 & above	59	39.3	100
	<u>Total</u>		150	100.0
Household Head Education	Illiterate	17	11.3	11.3
	Primary	23	15.4	26.7
	Matric	41	27.3	54
	Matric to B.Sc.	53	35.4	89.4
	Master & above	16	10.6	100
	<u>Total</u>		150	100.0
Occupation	Govt. Employee	50	33.4	33.4
	Private Employee	37	24.6	58
	Self Employed	63	42	100
	Other	NIL	0	100
	<u>Total</u>		<u>150</u>	<u>100.0</u>
Household Size	up to 5 Person	45	30	30
	6-10 Person	94	62.6	92.6
	11-15 person	10	6.7	99.3

	16 & Above Person	01	0.7	100
	<u>Total</u>	<u>150</u>	<u>100</u>	
Income Per month	Up to 10000	6	4	4
	10000-20000	53	35.3	39.3
	20000-30000	40	26.7	66
	30000-40000	19	12.6	78.6
	40000 & above	32	21.4	100
	Total	150	100.0	
Highest Level of Education In Household	Primary	3	2	2
	Matric	24	16	18
	Matric to B.Sc.	55	36.6	54.6
	Master & above	68	45.4	100
	Total	150	100.0	

Note: Author own Calculation Based on the primary collected data.

Table 4.1 shows that socio economic status of the respondent in selected areas of Tehsil Balakot. Mostly the household head /respondent age are more than 40 years. Table depicts that 30% of the respondent are aged between 20-40 years and 70% respondent are aged between 40-60 years. Literacy rate is higher in district Manshera with comparison to other districts of KPK. In my survey around 35% of the household head education is above Matric, 11% respondents are illiterate and 27% respondents are having the education till matric. Household size varies in the region, in hilly areas household size is larger as compared to plain areas. 62% respondent household size is between 6-10 people and around 30% respondent household size is 5 or less than 5.

According to source of earning around 30% respondent are working in Government sector, 42% a respondents are self-employed and remaining 28% are working in

private sector. Due a high literacy most of the respondents are engaged in service sector. 45% respondent tell that the highest level of education in their family is master or above.

4.1. Relief Operation in Earthquake

Rescue and relief operations started right after the disaster and it has to complete within the two weeks after disaster. In Earthquake 2005 relief and rescue operation started after two days because all the connected road to valley was destroyed. Hicks & Pappas (2006) argued that due to no proper plan by the government and civil institution in Pakistan the military has the authoritative role and the military has to carry out the rescue and relief operation in every disaster.

Table 4.2: Awareness about First Aid

Cluster id	Awareness about First Aid		Bandage	Stitching	Injection	BP Measurement
	Yes	No				
Plain Areas	23%	77%	100%	19%	91%	100%
Hilly Areas	14%	86%	100%	100%	100%	100%

Note: Author own Calculation Based on the primary collected data.

First Aid is a basic component of relief. Table 4.2 shows how much the people are aware of first aid in earthquake affected areas. Approximately 23% of respondent in plain and 14% respondents in hilly area knows about the first aid awareness, but in plain area percentage is higher than the hilly areas. Almost 100% of the selected people know about BP measurement and bandage but 19% and 91% respondent knows about stitching and injection is respectively.

Figure 4.1: Awareness about First Aid

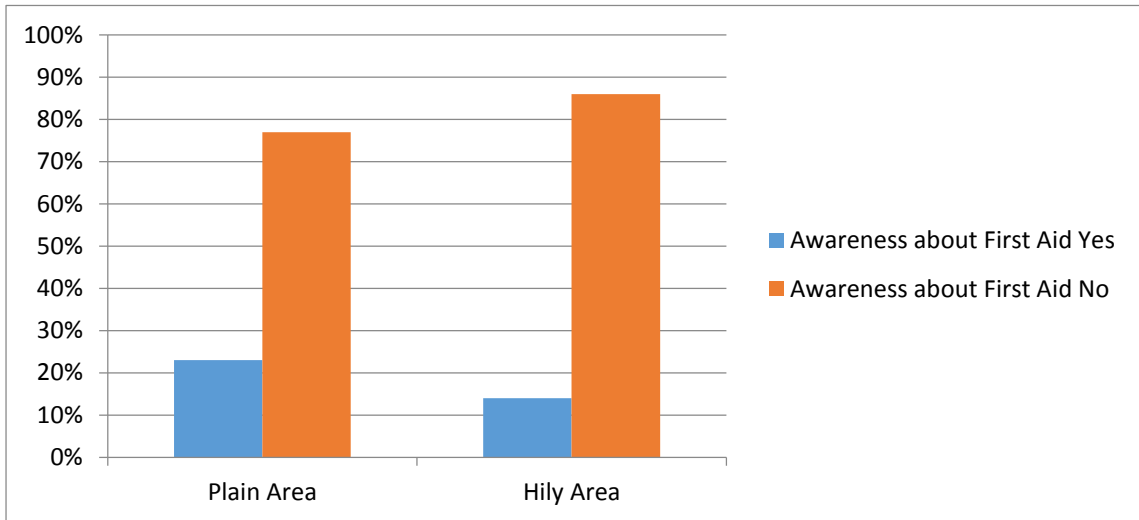
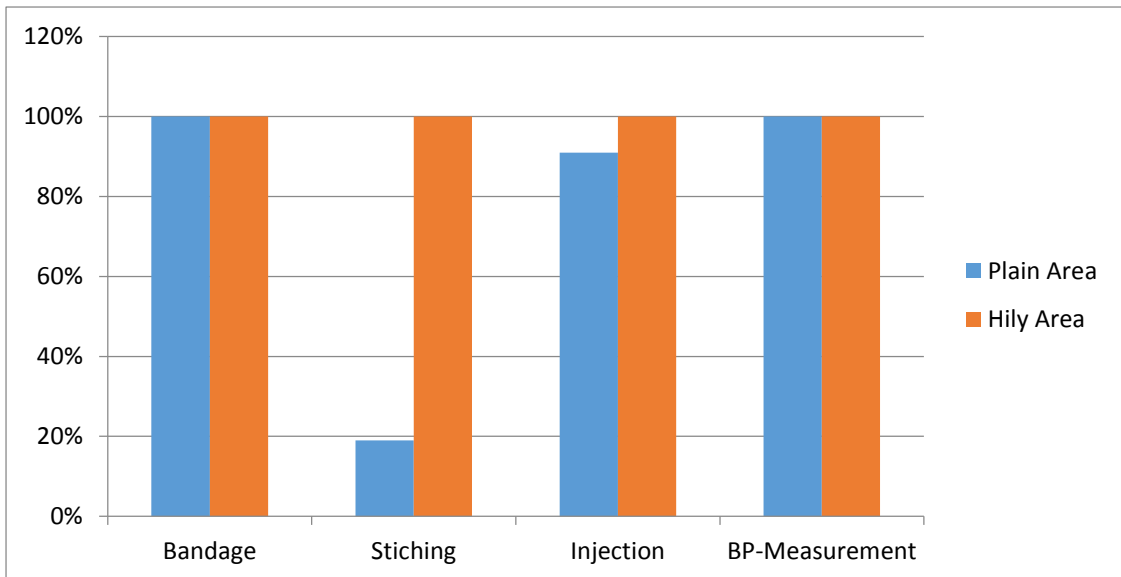


Figure 4.2: Awareness about First Aid Region Wise (Plain and Hilly)

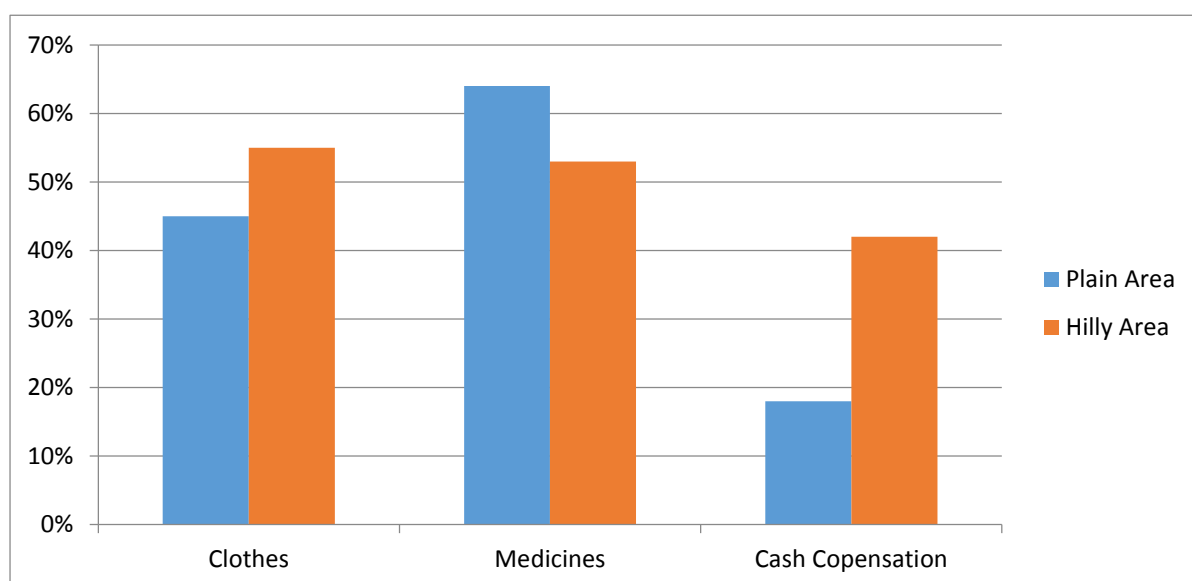


With discussion with community in plain areas they tells that NGO,s give 2 weeks training of first aid after earthquake at community level and in hilly areas no training is given and they still un aware how to cope with emergency in disaster. The people who were aware about first aid kit mostly they are working in health Centre or the NGO's gave them the training of first aid.

Table 4.3: Relief Provided in Earthquake

Clusters	Shelter	Drinking Water	Food	Clothes		Medicines		Cash Compensation	
				Yes	No	Yes	No	Yes	No
Plain Areas	100%	100%	100%	45%	55%	64%	36%	18%	82%
Hilly Areas	100%	100%	100%	55%	45%	53%	47%	42%	58%

Figure 4.3: Relief Provided in Earthquake



Earthquake hit northern areas of Pakistan on 8th October 2005. It destroyed infrastructure of the whole district Manshera. It is largest disaster of Pakistan with respect to fatalities. According to Red Cross the relief operation has to be completed within 1 or 2 weeks of disaster in affected areas. The relief is carried out in district after 2 days by government and provides shelter and food to affected community. All the connected roads to hilly areas destroyed due to earthquake. Relief operation started in hilly areas after 5 days. Figure 4.3 depicts that government provide shelter, food and drinking water to every affected person in both hilly and plain areas. 42% in hilly area and 18% in plain area people got the cash compensation from government

and NGO,s during the relief operation. Temporary tent villages set up by government and NGO's at safe places. NGO's and Pak army and provided immediate relief to affected community. According to Discussion with community local and religious organizations are the first to provide food and relief in hilly areas.

Table 4.4: Migration after Earthquake

Clusters	Migration		Migration Period		
	Yes	No	1- 3 Months	3-6 Months	above 6 Month
Plain Area	22%	78%	15%	30%	55%
Hilly Area	75%	25%	46%	42%	12%

Migration is a part of relief process. During disaster evacuation of people from disaster area to safe places is priority of Government. Paul (2007) argues that migration on temporary or permanent basis is always important strategy adopted by community confronted by natural disaster. In 2005 earthquake migration took place at macro level especially the people in hilly areas, around 80% people migrated to safe place or plain areas. People migrated in earthquake were resettled in tent villages by government or NGO's for short period of time. The stay of people in tent villages or shelter houses varied from 3 months to 6 months.

Figure 4.4: Migration after Earthquake

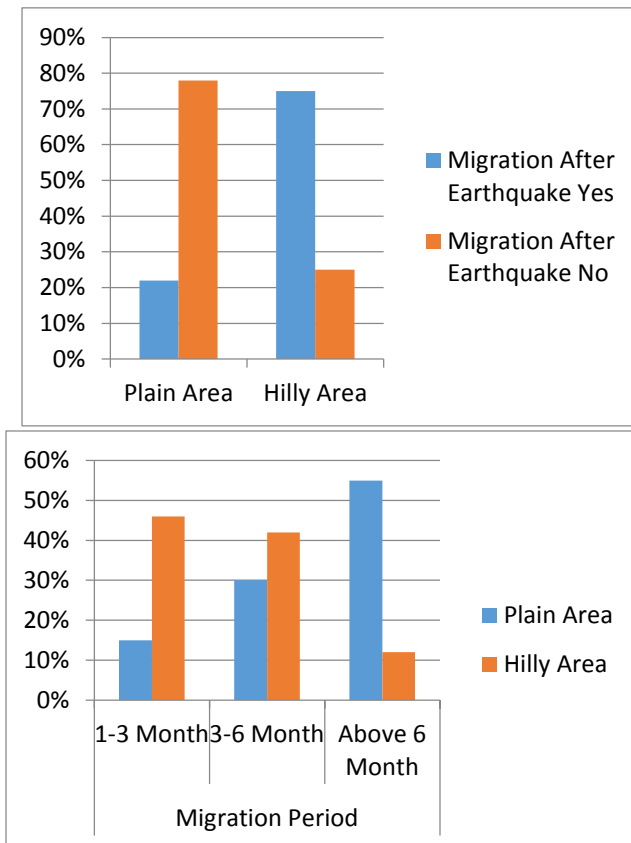


Figure 4.4 shows the migration trends show that 46% people stay in tent villages 1-3 months, 42% stay 3-6 Month and remaining 12% stay in rented building at safe places. Most of people after short stay resettled back at their places without help of government and NGO,s. .According to discussion with community in hilly areas peoples are not happy with government how they treated in tent villages and also no compensation amount given in relief or to re settle at their home place.

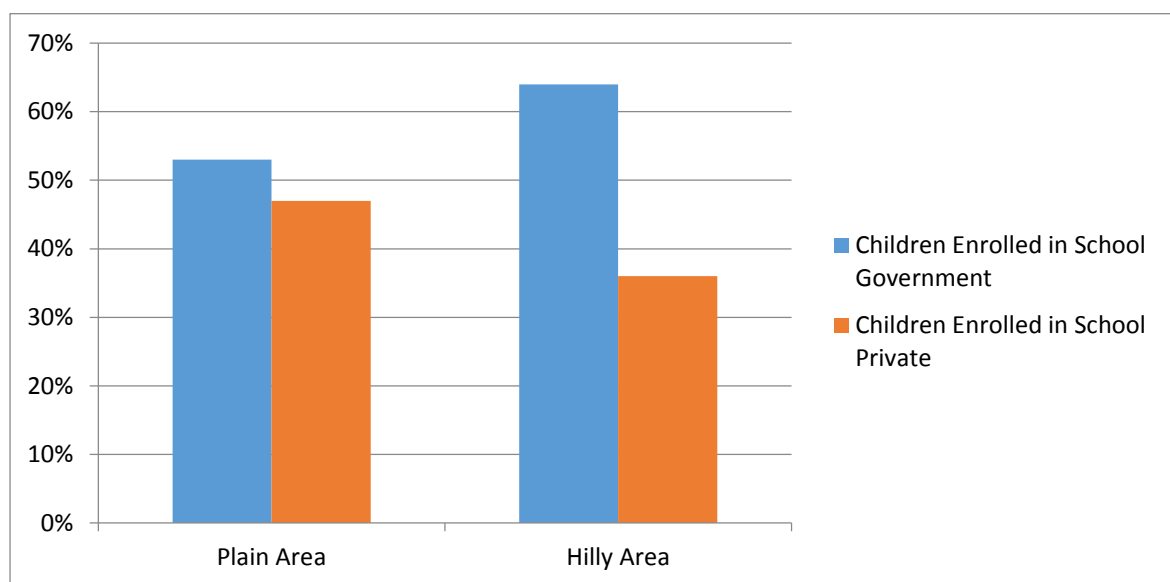
4.2. Educational Performance Before and After Earthquake

Education is the key component of development. The countries which gave preference to education showed positive growth. In Pakistan education sector is not to up to mark because of lack of interest of government in the educational sector. Olshansky (2006) argues that the rehabilitation and reconstruction of educational system is major challenge for the planners.

Table 4.5. Educational Performance before Earthquake

Clusters	Children Enrolled in School		Satisfied with facilities at Schools		Monthly and weekly Result Provided	
	Government	Private	Yes	No	Yes	No
Plain Area	53%	47%	44%	56%	32%	68%
Hilly Area	64%	36%	4%	96%	0	100%

Figure 4.5. Children Enrollment



In 2005 earthquake all the schools were destroyed due to poor infrastructure and expired building in disaster areas. A huge number of fatalities occurred in schools and colleges or in government buildings. During the survey it explore most of students are enrolled in Government Schools. But the result indicates that the people are not satisfied with the facilities provided at the school. It is determined that before earthquake government schools has no adequate facilities and teacher are not giving the proper time to student. Figure 4.5 shows that in hilly areas more than 60% student were in enrolled in government school and conditions are worse because teacher comes to school 2 days a week. In a discussion with community in hilly areas people argues that schools are closed for 6 month in a year and in other six month teacher

comes to school very often. In plain areas more than 50% student enrolled in government run schools but the parent are not satisfied with the teacher teaching and most of the respondents tell that the teacher uses the uses the student for their private work.

Table 4.6 Educational Performance after Earthquake

Clusters	Children Enrolled in School		Satisfied with facilities at School		Monthly and weekly Result Provided	
	Government	Private	Yes	No	Yes	No
Plain Areas	66%	34%	74%	26%	34%	66%
Hilly Areas	91%	9%	64%	36%	27%	73%

Figure 4.6: Children Enrollment after Earthquake

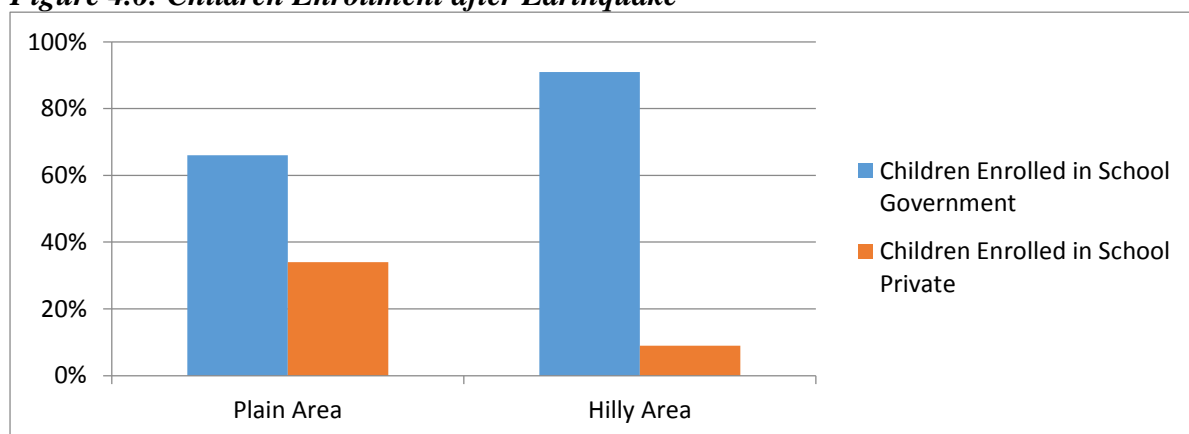


Figure 4.6 depicts that enrollment rate in government schools or colleges improved due to better facilities in education sector after earthquake. Private school enrollment rate drops due to better facilities at government school. But monthly or weekly result in government school still not provided but private give the monthly or weekly report. After earthquake and in especially in last 3 years teachers are giving proper time to students and their teaching standard improves over the year. More than 90% students in hilly areas are now enrolled in government schools and the parents are very much

satisfied with their children performance in school. The basic reason for the teacher improvement is the monitoring of schools by the government.

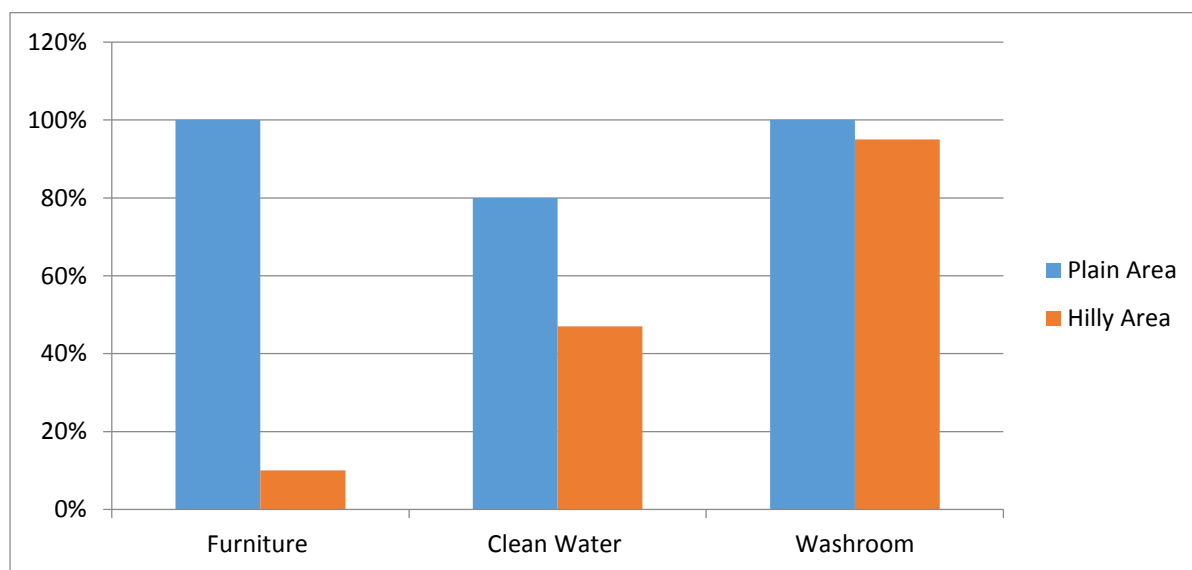
4.3. Facility at School before and after Earthquake

It is argued by researchers like Walter (2007) and Baker (2005) that facilities like school infrastructure, books, curriculum and teaching techniques help in achieving greater scores at schools. Before the earthquake, the condition of schools was not up to the mark. Students did not even have basic facilities like classrooms which can be connected to overall low scores at school.

Table 4.7. Facility at School before Earthquake

Cluster	Furniture		Clean water		Washroom	
	Yes	No	Yes	No	Yes	No
Plain Area	100%	0	80%	20%	100%	0
Hilly Area	10%	90%	47%	53%	95%	5%

Figure 4.7 Facilities at School before Earthquake



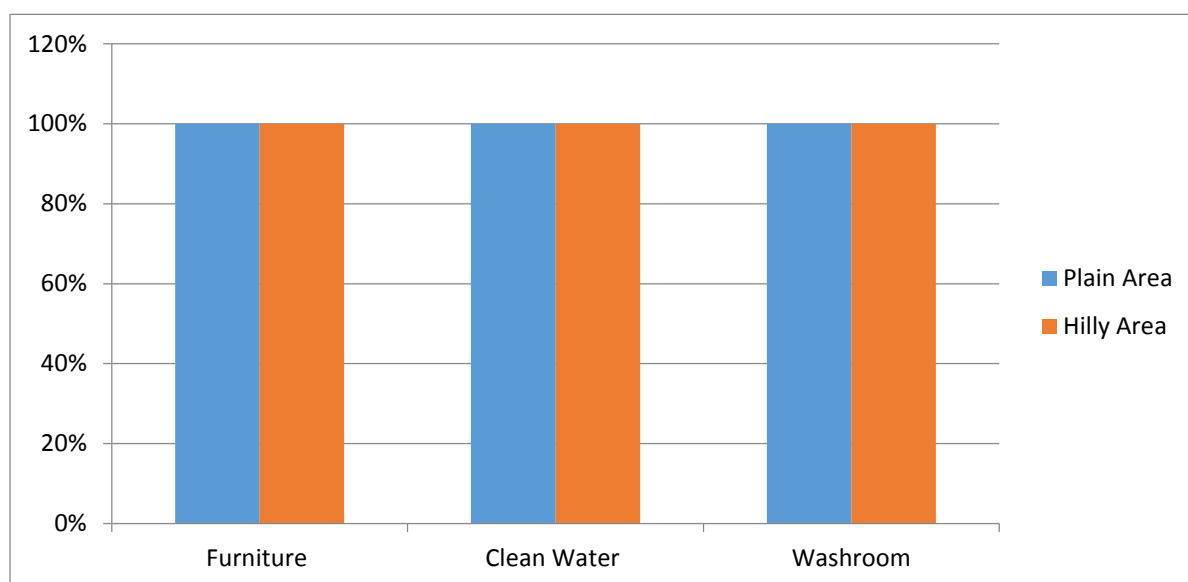
Before earth quake the facilities are very poor in schools especially in hilly areas there was no availability of furniture in schools and student has to sit on to ground. Figure

4.7 shows that almost 100% schools in hilly areas were running without furniture and washroom. But in plain areas there are proper furniture in school, clean water and washroom before earthquake. Facilities like scholarships, transport, books and stipend is not available in both areas and lack of resources most of the parent are not willing to send their children to schools.

Table 4.8 Facilities at School after Earthquake

Cluster	Furniture	Clean water	Washroom
	Yes	Yes	Yes
Plain Area	100%	100%	100%
Hilly Area	100%	100%	100%

Graph 4.8 Facilities at School after Earthquake



After earthquake the educational sector show a positive improvement. Government gives special incentive to promote education and increasing the enrollment. The facilities available at the government schools are satisfactory. There is proper furniture and free books for the student and clean water is also available within the school premises. Before earthquake in hilly areas girls enrollment in schools was very low and to promote the girls enrollment ratio in the hilly areas the government give

stipend and free uniform to the students. In hilly areas NGO's provide the transportation facility to female student.

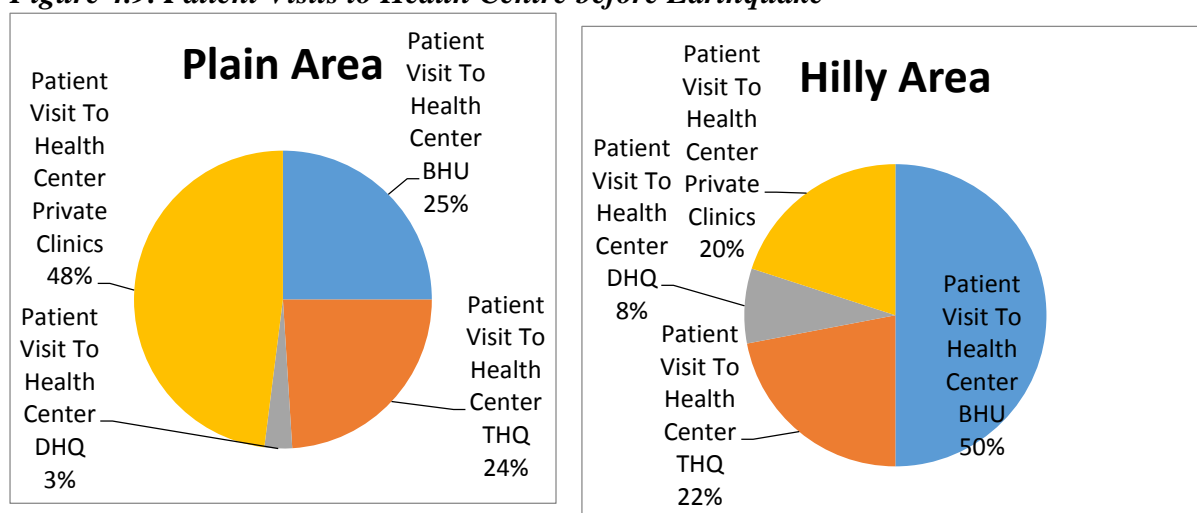
4.4. Health Sector Performance before and after Earthquake

Health is a key indicator of an areas productivity. It is directly related to one individual output therefore betterment or reduction in health facility affects productivity. Provision of health facilities are dependent upon infrastructure. Before earthquake the health infrastructure was well developed which was badly affected by earthquake. Generally the health facilities reduced after earthquake.

Table 4.9. Patient Visits to Health Centers before earthquake

Cluster	BHU	THQ	DHQ	Private Clinics	Total
Plain Area	25%	24%	3%	48%	100%
Hilly Area	50%	22%	8%	20%	100%

Figure 4.9. Patient Visits to Health Centre before Earthquake



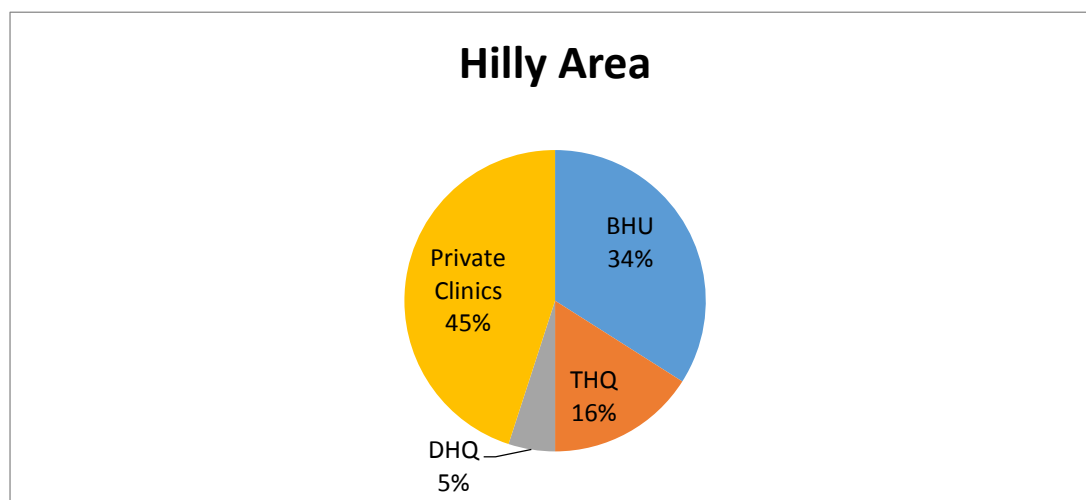
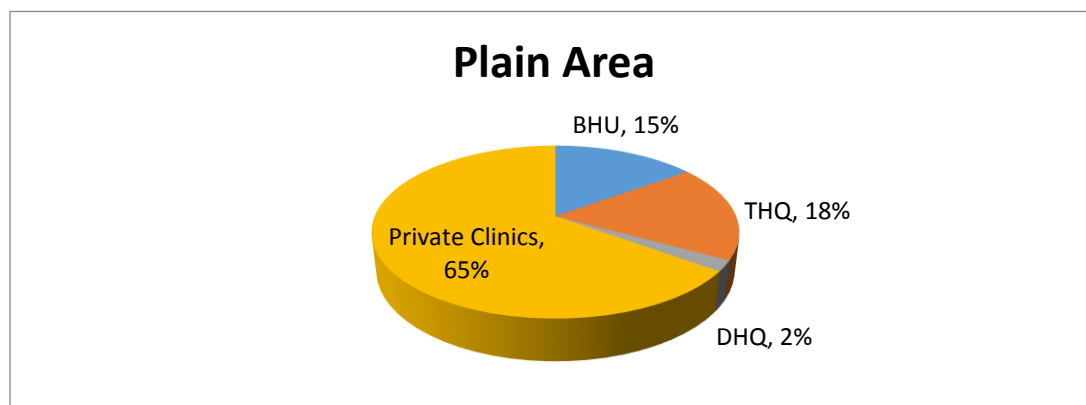
In question regarding patient visit to hospital in case of emergency or regular checkup before earthquake most of the people preferred to visit the private clinics for checkup. But in hilly areas due to less resources people visit to nearby Basic Health Unit.

Figure 4.9 depicts that in plain areas almost 23%, 30%, 3% and 44% of patient visit Basic Health Unit (BHU), Tehsil Headquarter Hospital (THQ), District Headquarter Hospital (DHQ) and private clinics respectively. In hilly areas, almost 48% people visit to BHU and 30%, 8 % and 14% of the people visit to THQ, DHQ and Private Clinics respectively. Due to comparatively higher income of people in plain areas they prefer to visit private clinics rather than the government hospital.

Table 4.10. Patient Visit to health Centers after Earthquake

Cluster	BHU	THQ	DHQ	Private Clinics	Total
Plain Areas	15%	18%	2%	65%	100%
Hilly Areas	34%	16%	5%	45%	100%

Figure 4.10. Patient Visit to health Centers after Earthquake

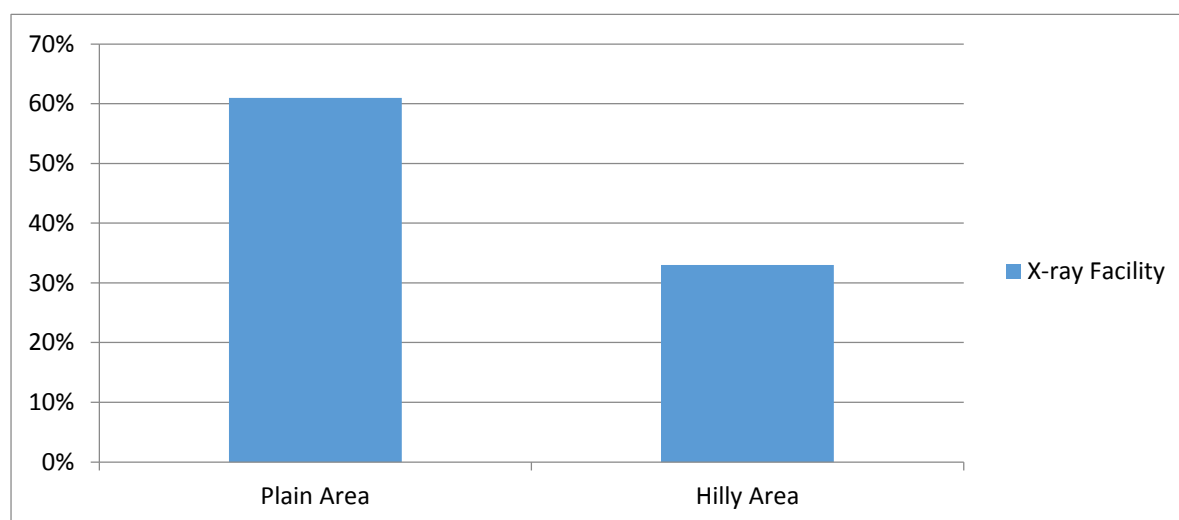


Due to poor facilities in health sector people have to travel long distance to visit the private clinics. After passing 11 years of earthquake there is no proper building of THQ at Balakot. People have to visit the private clinics in case of emergency. Figure 4.10 shows that now more than 65% and 45% Patients visit private clinics in both hilly and plain areas respectively. Due to not availability of facilities like (Blood Test, X-ray and Gynae) in THQ people have to go to private clinics or DHQ hospital. In discussion with the community the participants argued that government promise to build the THQ hospital in Balakot has not been fulfilled for past 11 years. Most of the respondents told that there is no proper specialist available at night time and the technicians are working as doctors. In basic health unit technician works as a doctor and most of time they complicate the cases.

Table 4.11 Facilities at Hospital before Earthquake

Clusters	Emergency	Medicine Availability	X-rays		Gynae Operate
	Yes	No	Yes	No	No
Plain Area	100%	100%	61%	39%	100%
Hilly Area	100%	100%	34%	66%	100%

Figure 4.11. Facilities at Hospital before Earthquake

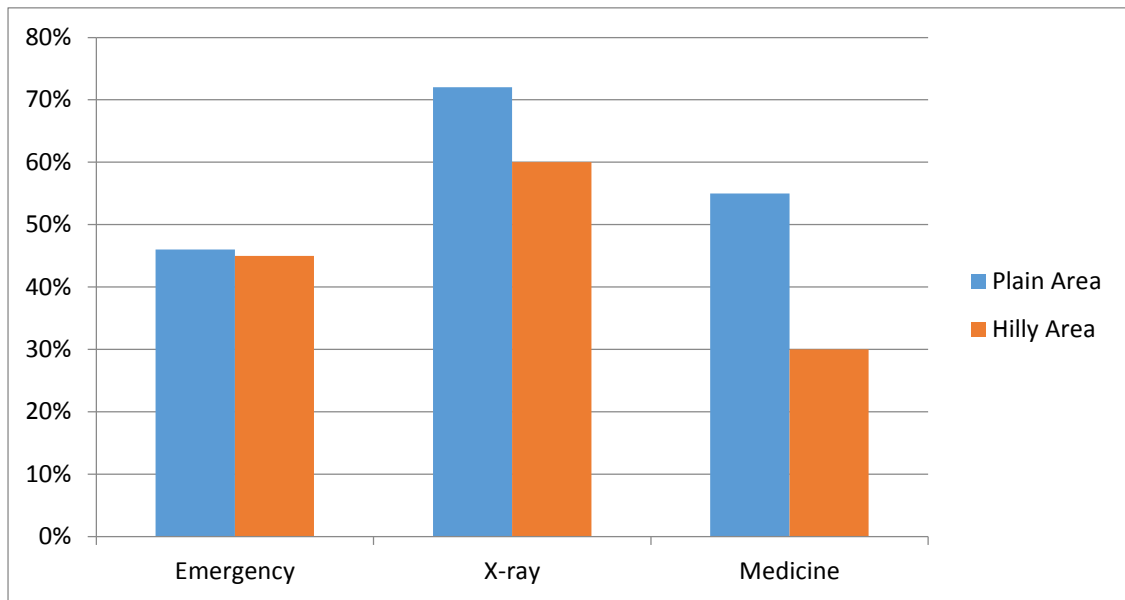


In question regarding facilities provided at government hospital people argued that there was no availability of medicine before earthquake. Only the emergency of hospital was under operation in which minor emergencies were treated. In case of severe condition patient were referred to DHQ hospital. Figure 4.11 shows that 100% people responded that there are no facilities of Gynae cases, Blood Test and Free Medicines in nearby BHU or THQ. Among the respondents, 50% said that they avail the facilities of X-Ray at THQ but have to wait for long time. Sobern, Frenk, & Sepcjlveda (1986) argued that the health reform in Mexico after the earthquakes was carried out at priority basis and health emergency was announced by the government, health centers were rebuilt and reorganized in favor of general public. In Pakistan after even 11 years of earthquake there is no state of the art health center in Tehsil Balakot and this shows the negligence of government regarding health sector.

Table 4.12. Facilities at Hospital after Earthquake

Clusters	Emergency		Medicine Availability		X-ray		Gynae Operate
	Yes	No	Yes	No	Yes	No	No
Plain Area	46%	54%	55%	45%	72%	28%	100%
Hilly Area	45%	55%	30%	70%	60%	40%	100%

Figure 4.12. Facilities at Hospital after Earthquake



Before earthquake the health sector is quite well now. At that THQ has its own building in which emergency will be running 24/7 but after earthquake THQ building is not build and hospital is running at a rented building. There is no proper emergency system in THQ and Patient refers to DHQ or any private Hospital. In a population of almost 4 Lacs there is no proper health facilities at THQ. Figure 4.12 shows that there is no Gynae facility in whole Tehsil by the government. X-Ray facility in THQ is available on and off basis but there is no facility of laboratory for blood or any other type of test at THQ. In discussion with stakeholder said that we have shortage of fund and we are facing difficulties to run the hospital. One of the doctor told that if light breakdown we don't have any alternative source to carry on our work. He told that most of time in night we do minor surgeries in emergency light.

4.5. Infrastructural and Communication System Improvement before and after Earthquake

Infrastructure and communication is very important in a globalized world we live in. It increases mobility and access to information. Earthquake provided an avenue for development in infrastructure and communications. Before earthquake there was

minimal infrastructure and a very weak communication system. After earthquake with the help of Government, Army and foreign and local NGOs a well-planned infrastructure was design and implemented throughout the district. The road networks, bridges and sanitation system was developed from the scratch. Moreover, Communications network was spread with a huge coverage throughout the district. This resulted in people having greater access to information and greater connectivity.

Table 4.13. Infrastructural Improvement before Earthquake

Clusters	Road Construction		Electricity		Sanitation		Water Supply	
	Yes	No	Yes	No	Yes	No	Yes	No
Plain Area	96%	4%	100%	0	12%	88%	74%	26%
Hilly Area	31%	69%	40%	60%	0	100%	79%	21%

Infrastructure is the most important component of development. Due to backward and outreach areas, the infrastructure condition in this tehsil was not good before earthquake. In survey the people argued that in hilly areas there were no transportation facilities in most of the areas and they have to transport their necessities of life through animals.

Figure 4.13. Infrastructural Improvements before Earthquake

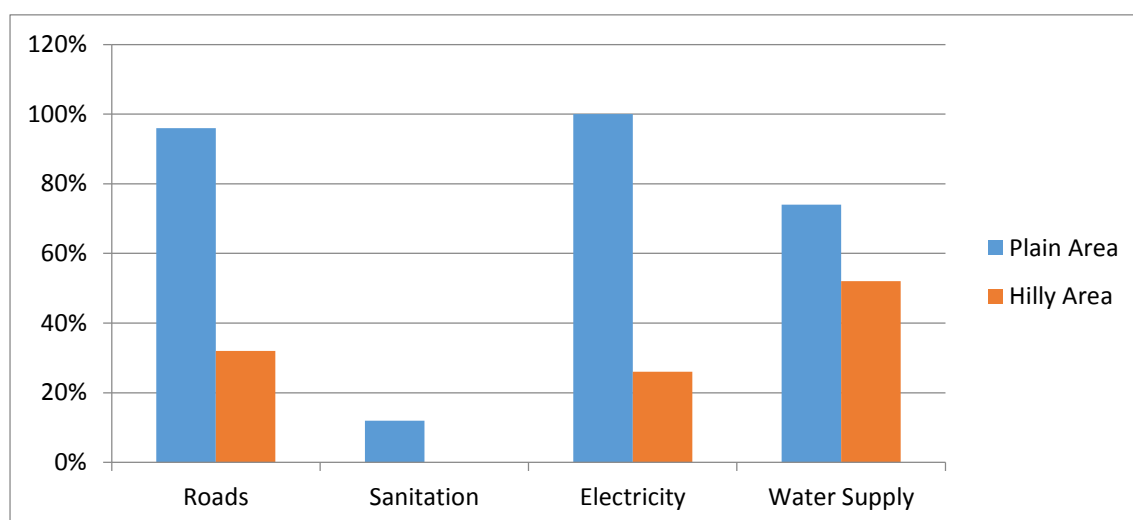


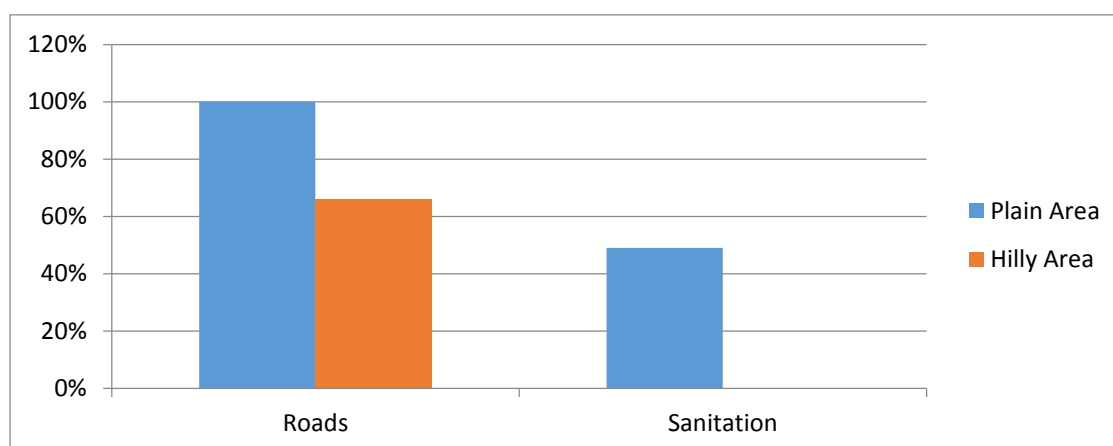
Figure 4.13 shows that 60% Of the people in hilly areas they were living without electricity and 100% respondents said that there is no proper sanitation facility in their villages. In plain areas 88% respondent said there is no proper sanitation system planned by the government. Community planned the sanitation system from its own resources. In plain areas, almost all of the population have the facility of electricity and water supply at its doorstep.

Table 4.14. Infrastructural Improvement after Earthquake

Clusters	Road Construction		Electricity	Sanitation		Water Supply
	Yes	No	Yes	Yes	No	Yes
Plain Area	100%	0	100%	54%	46%	100%
Hilly Area	66%	34%	100%	0	100%	100%

After earthquake, the infrastructure in Tehsil is very much improved. Almost every village has the facility of electricity. This provision of electricity is made possible after earthquake. Most of the villages produce their own electricity through turbines, which were installed by local community in collaboration with NGO's.

Figure 4.14. Infrastructural Improvements after Earthquake

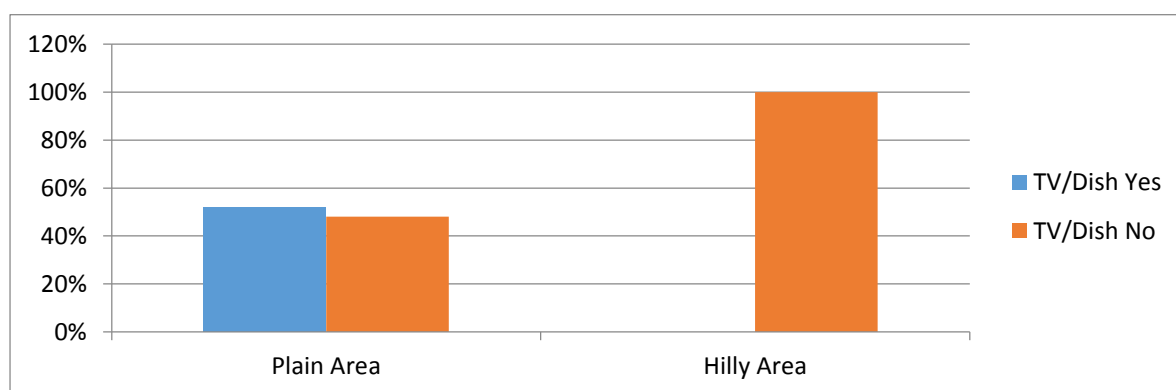


After earthquake, new roads were constructed in both hilly and plain areas, due to which small villages are now connected with main roads. Still there are some villages in hilly areas which have no road facility. After earthquake sanitation system improved in plain areas but in hilly areas there is still lack of proper sanitation system. Almost every house has a water supply provided by the government which was not present before earthquake.

Table 4.15. Communication System before Earthquake

Clusters	Mobile	Radio	TV Dish or Cable		Newspaper
	No	Yes	Yes	No	Yes
Plain Area	100%	100%	52%	48%	100%
Hilly Area	100%	100%	0	100%	100%

Figure 4.15. Communication System before Earthquake



Communication is a way through which one communicates with people in faraway areas. Before 2005 earthquake there was no effective communication and entertainment system in hilly areas.

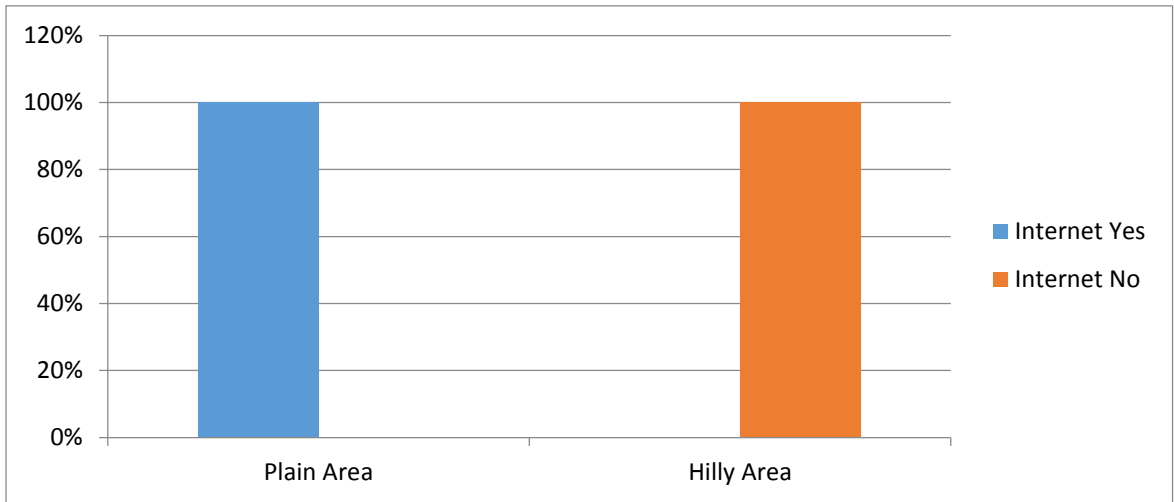
Figure 4.14 represents that 100% respondents responded that there was no facility of mobile in both the hilly and plain areas but in plain areas the people had the facility of landline phone. In plain and hilly areas people had radio and newspaper facility through which they were connected with the outer world. In hilly areas, there was no concept of dish TV which was a source of entertainment and in plain areas for more than 50% of the population. Moreover, no internet facility was available before earthquake.

Table 4.16 Communication System after Earthquake

Clusters	Mobile	Radio	Tv Dish or Cable	Internet	
	Yes	Yes	Yes	Yes	No
Plain Area	100%	100%	100%	100%	0
Hilly Area	100%	100%	100%	0	100%

After the earthquake scenario was quite different. Almost everyone is using mobile and people are more connected to each other through fast mode of telecommunication. After earthquake communication system grew fast in both hilly and plain areas. In plain areas, internet facility is available now through which people communicate with the outer world. Almost all the people in tehsil have all the facility through which they communicate with other people and get entertained through TV and radio.

Figure 4.16 Communication System after Earthquake

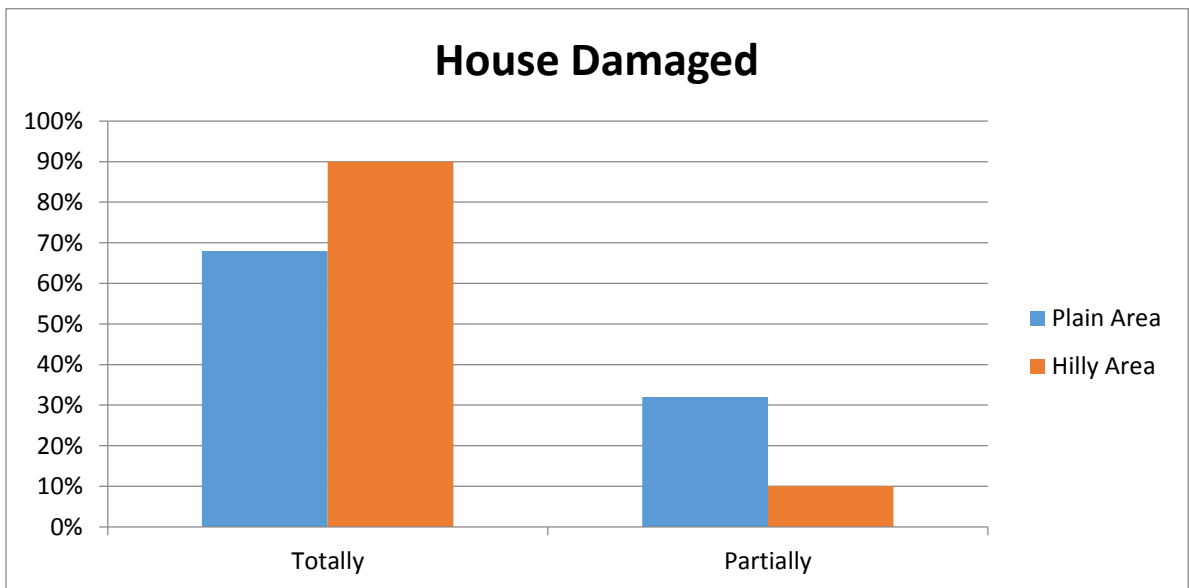


4.6. Reconstruction after Earthquake

Table 4.17 House Damaged in Earthquake

Clusters	House Damaged		Financial Assistance In Reconstruction
	Totally	Partially	Yes
Plain Area	69%	31%	100%
Hilly Area	90%	10%	100%

Figure 4.17 House Damaged in Earthquake

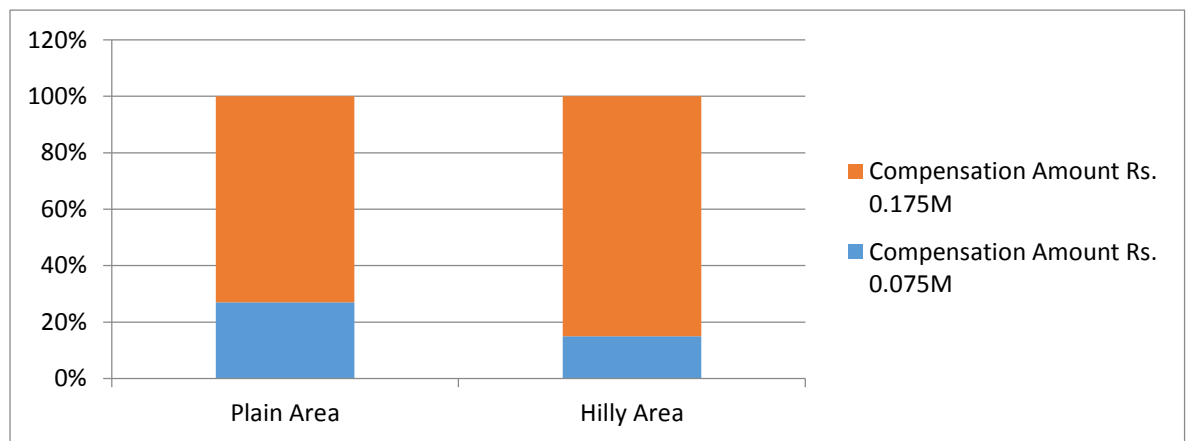


2005 Earthquake was one of the most disastrous ones in the history of Pakistan. Almost all the houses in Tehsil Balakot were totally damaged but the damage was higher specifically in Balakot city and its surrounding hilly areas. Figure 4.17 shows that 68% respondent's houses in plain areas were totally destroyed, whereas 32% respondent's houses were partially damaged in Tehsil Balakot. The houses which were partially damaged were not in a condition to be used by the inhabitants. In hilly areas 90% houses were totally damaged and the remaining 10% were partially damaged.

Table 4.18 Compensation for Damage House

Clusters	Compensation Money	
	75000	175000
Plain Areas	27%	73%
Hilly Areas	15%	85%

Figure 4.18 Compensation for Damage House



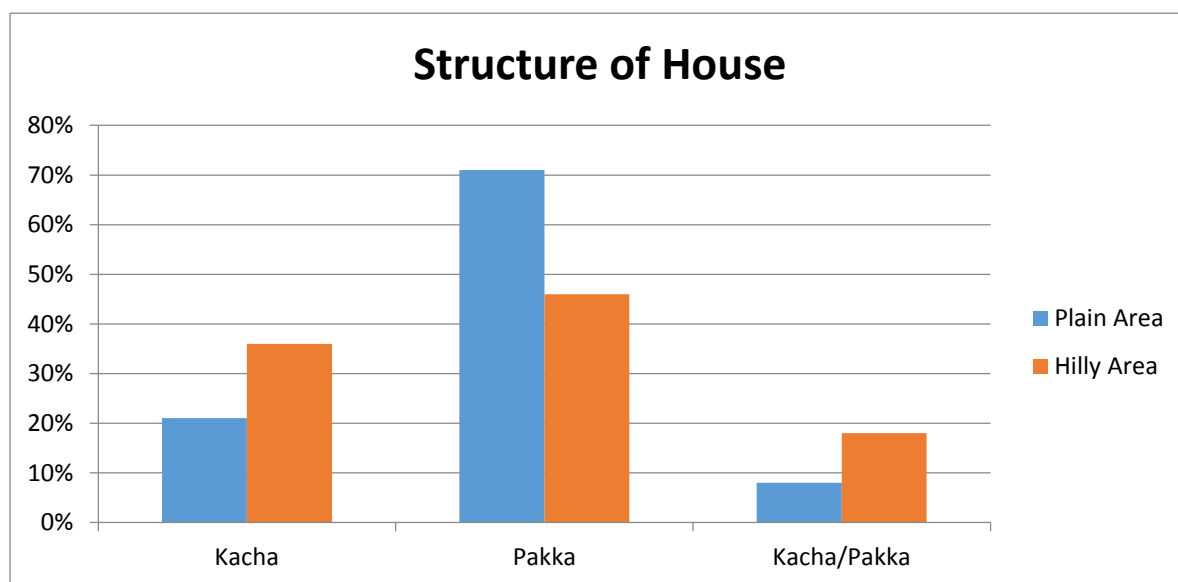
Government announced the compensation for the people in affected areas. Figure 4.18 shows that the houses which were completely destroyed were compensated with an amount of 0.175M and houses which were partially damaged were compensated with an amount of 0.075M. In discussion with the local people, they argued that the

amount given by government was not enough to build a safe or earthquake proof house and the people complained that they did not get the right compensation for their houses. 38% and 15% of the people got the amount of 0.075M in both plain and hilly areas respectively for their damaged houses. In plain and hilly areas around 62% and 85% people got compensated with an amount of 0.175M.

Table 4.19 Structure of House

Clusters	Kacha	Pakka	Kacha & Pakka Mix
Plain Area	21%	71%	8%
Hilly Area	36%	46%	18%

Figure 4.19 Structure of House



Questions regarding the structure of the house in questionnaire showed that in plain areas most of the houses were Pakka (Concrete made houses) and in hilly areas most of houses were Kacha (Soil & wood Made Houses). Figure 4.19 depicts in hilly areas 37% respondents told that their houses were Kacha and 45% told that their houses were pakka and remaining 18% told that their houses are mix. In plain areas almost 21%, 72% and 7% were Kacha, Pakka and mix respectively.

Table 4.20 Construction of House

Clusters	Government Give Design		Construct house on design		Govt Monitor Construction Process	
	Yes	No	Yes	No	Yes	No
Plain Area	84%	16%	28%	72%	26%	74%
Hilly Area	96%	4%	75%	25%	46%	56%

After 2005 earthquake, government formed an organization named ERRA for the reconstruction of infrastructure and houses in the earthquake affected areas with a motive of “Build Back Better”. For reconstruction of houses in affected areas ERRA gave a complete plan in which the community had to construct a house.

Figure 4.20 Construction of House

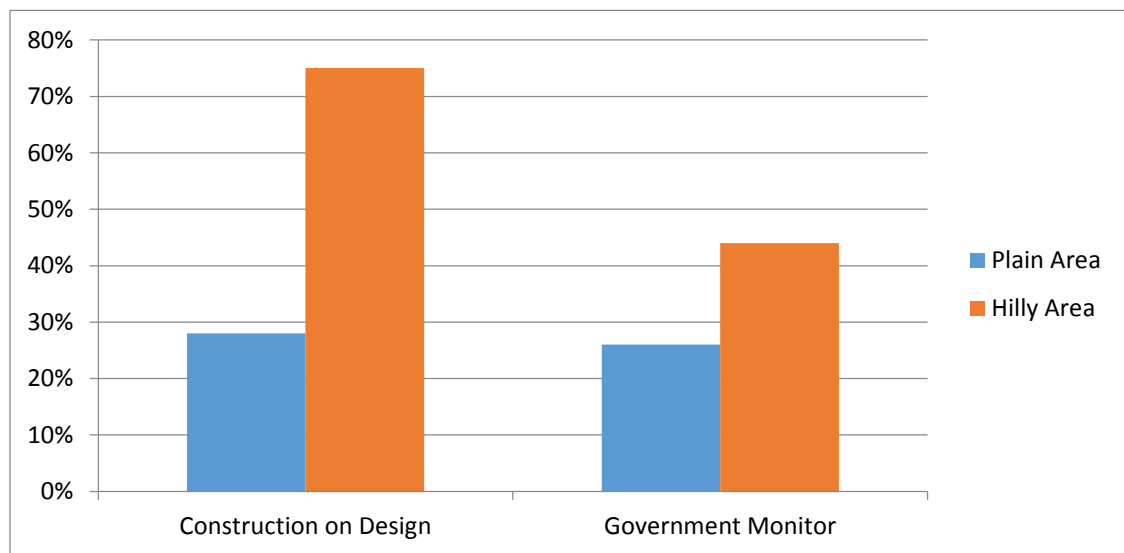


Figure 4.20 shows that in hilly and plain areas 97% and 85% respondents in both areas argued that the government gave them a plan to construct a safe house but 75% people in plains and 28% in hilly areas constructed their house according to the government plan or design. They argued that government organization monitors the construction process step by step.

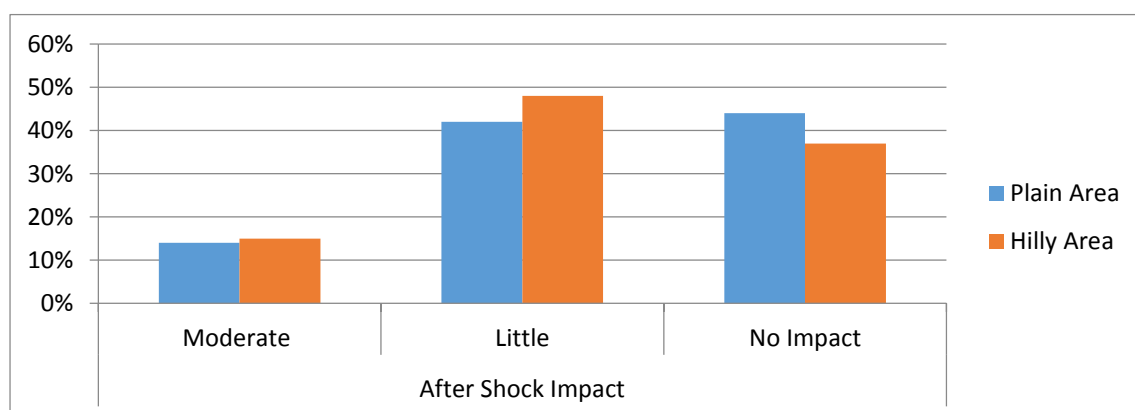
In discussion with the people it was learned that the compensation amount given by government was not enough to build a house on the government plan or design, therefore the locals preferred to build a house from their own resources with same traditional design.

Table 4.21 after Shock Impact on House

Clusters	Moderate	Little	No impact
Plain Areas	15%	42%	43%
Hilly Areas	15%	48%	37%

Due to the aftershocks, the government declared Tehsil Balakot a RED ZONE area where construction was prohibited. Due to delay in government project (NEW BALAKOT CITY) to shift the people at a safe place people resettle in the RED ZONE area. Figure 4.21 shows after shock impact on houses. 44% respondent said that there was impact of aftershock on their house whereas 43% and 13% respondent told that their houses had little or moderate after shock impact on their houses.

Figure 4.21 After Shock Impact on House



4.7 Focus Group Discussion:

Two FGDs were conducted in Tehsil Balakot, one in hilly areas and other in plain areas. Different groups of people were present in both the discussions. The reason for conducting the FDG was to dig out the information which was unexplained in the questionnaire and also to incorporate the mix of views of different group of people. FGDs were transcribed and the following themes emerged from discussion.

4.8.1 Participant of FGD

Professionals	Doctors, Working people, Educationalists
Community Leaders	Nambardar, Nazism or councilors
Lower Income people	Daily wage worker, Small farmer and Mazaras

Relief Operation in Earthquake:

In a question about how the relief operation was carried out in earthquake people were very much satisfied about the relief operation especially in plain areas. One of the participants told that the Pak Army played a key role in relief operation. They were the first to reach at the disaster place along with one of the religious based NGO's. one of participant disagreed that the major portion of relief goods went to WADERA of the village and distributed little amongst the community. On the contrary, NAZIM of the village council told that he distributed the relief goods equally amongst the community. In this discussion, most of the participants agreed that they got the relief goods but they didn't receive the cash compensation from government or NGO's.

In hilly areas, the relief operation started very late due to cut off of road from their villages so they worked as a community to rescue each other. They said that they got the relief from Pak Army after three days of earthquake. The goods were distributed to them through helicopter and their injured were also rescued by army. One of the participants told that the army officers helped the villagers and evacuated them from the disaster struck area. Army setup tent villages for the people coming from hilly areas and provided them with immediate relief at tent villages. Participants added that relief operation was carried out very well but the government have not yet paid compensation to settle back, therefore they shifted to their villages on their own.

On a question regarding the mitigation and preparedness in future, some of the participant told that they received a training after earthquake. NGO's trained them over the use of First Aid Box. Mostly these trainings were given at schools.

The people who came from the hilly areas told that some of them got training during their stay at Pak Army Tent village. And Pak Army provided them the first aid box.

Education Sector

In a discussion regarding educational performance after the earthquake almost all the participants were satisfied. They said that government provided their children with free books and now the teachers are giving proper time. One of the participants told that the teacher was not coming to school on daily basis and most of teacher hired someone else for teaching in their place. One of the participants who is currently teaching in government school told that the government is now focusing on education and offers scholarship for brilliant students. Government also conducts extra-curricular activities for students. The major change after the earthquake is more focus

over girl's education and the girls are awarded with stipend to meet their educational expenses.

Education after earthquake has improved a great deal, especially the infrastructure. Government provides the furniture, supply of water and building of washroom within the school. Before earthquake the student has to be sit on the ground. Teacher used the student for their private work, now the scenario has totally changed teacher are giving proper time to students. Due to hilly areas teacher come two or three times in a month and most of the time schools remained closed nut now due to efficient monitoring system by government, teacher attendance has also improved.

Health Sector

In a question on how people see the health sector before and after earthquake with respect to their area?

In plain areas the respondents told that they are not happy with the health facility. They told that before earthquake health sector was quite better than today. There were some specialist doctors present and hospital emergency was quite well, minor operations were carried out in the THQ Hospital. One of participant said that at present one cannot find a good doctor in THQ hospital and in case of emergency they have to travel to Abbottabad. Another participant told that before earthquake BHU were working and doctors were present round the clock in BHU. They complained that the government is not constructing the building of THQ, first they were delaying that tehsil Balakot is a RED ZONE area so construction is not possible. One of participant told that the government has now improved the building for THQ and its construction will be completed in next 3 years.

In a discussion regarding the health sector in hilly areas the people were not satisfied with the health facilities provided by the government. All the participants agreed that before earthquake health sector was quite well. One of the participants told that I am a technician in BHU but I am also a part time doctor. For the past 10 years, there is no doctor in BHU and technicians are working as a part time doctor.

Infrastructural Improvement

In plain areas, the infrastructure was good enough before earthquake but after earthquake it improved more. Roads were constructed within smaller villages to connect with main road. One of the participants told that there was no proper sanitation system but now the government planed the sanitation system which benefited most of the community. Most of the participants told that they have shortage of water supply due to which they have to bring water from far flung areas but after earthquake their water supply shortage ended. Before earthquake there was no mobile phone service in whole area and they communicate through landline or personal messages or letter but after the earthquake mobile phones made communication faster and easier. After earthquake the internet made their communication faster with their relatives living abroad.

In discussion with the people in hilly areas the participants were satisfied about the infrastructural improvement. One of the participants told that after the earthquake government and NGO's constructed the link road in their villages. Before earthquake it took 2 to 3 hours walk to reach home, but now the roads made the commute easy and safe. They also told that they still had the problem of sanitation system, government will have to plan the proper sanitation system for the villagers. One of the participants told that earthquake was somehow blessing for them. Before earthquake

there was no electricity in the villages but after earthquake facility of electricity have been provided. One of the participants told that before earthquake way of communicating was difficult, if they wanted a message to be delivered they had to send a person for delivering message which was very time consuming but now the mobile phones made their mode of communication very easy and swift.

Post Disaster Reconstruction.

In plain areas the participants told that the government provided with insufficient funds to construct a house. They cross questioned about the feasibility of constructing a house in Rs. 0.175M. One of the participants told that his house was totally damaged and government gave him less compensation amount. They also told that the government gave them a design to construct a house but compensation amount against the design was very low. Participants told that they constructed their houses with their own resources and couldn't even build one room with the amount given by government. In plain areas people constructed the house with their own traditional design rather than the design provided by the government.

In hilly area most of the people constructed their houses on government design because it was affordable within the given amount. In hilly areas most of the houses were made by wood and people considered these safe in earthquake. They also complained that they had not received the exact amount promised by the government. One of the participants told that his house was totally damaged but he could not receive the compensation amount and he pointed a person in village saying that his every family member got the compensation amount. He complained that the distribution process of the compensation amount was not transparent and efficient.

Community Participation

In question regarding community participation in relief and Recovery process the respondents agreed that there was no participation of community in decision making. One of the participants told that the Councilor has full control over the relief goods and Government representative and NGOs consult them for relief goods distribution. But in the list the mazaras are ignored and in distribution of goods preference is given to their relatives and friends. In the reconstruction process the government did not cooperate with the community and ERRA provided the house design and that house could not be constructed within the government compensated amount. In discussion with the community in hilly areas people were not satisfied with the government. They told that first they were settled in tent villages for a short period of time but they returned homes after three month without the help of government. The reconstruction is prohibited in their villages due to Red Zone and government planned to re settle them at new place. But after eleven years government could not re settle them at new place, so they had to reconstruct their houses on own resources.

4.8. Conclusion

After 11 years of earthquake community is still facing a lot of problems. In 2005 earthquake the community was satisfied with the rescue and relief operation which was carried out by military and some of the religious based organizations. The study explores the migration of the people to safe places by the military but there was no policy devised by government to resettle them at their own places. Proper compensation was not given by the government to community for traveling back to their villages.

This study explores that the education sector has improved and government announced the emergency for education. Teachers are giving proper time to school and parents are satisfied with their children's' performance. Unfortunately health sector is ignored after the earthquake, still in Balakot Tehsil Headquarter Hospital (THQ) is not constructed and hospital is running in two room rented building. THQ hospital is lacking facilities of operation, blood test and emergency for the community. The study explores that the community is satisfied with the infrastructural improvement. New roads were built in hilly and plain areas, water supply made possible and proper sanitation system is planned in plain areas. Telecommunication system has also improved after earthquake, mobile phone services are launched as well as dish TV.

The study explores that reconstruction was a difficult phase after earthquake. Tehsil Balakot was declared RED ZONE by the government and construction of houses and Government building was prohibited. Government planned to resettle the community from RED ZONE area to safe place naming NEW BALAKOT CITY but after 11 years government can't resettle the community to that place. The study also explores that compensation amount given by the government was very low and in that amount no one construct house according to government design.

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APPENDIX A

INFORMATION REGARDING SOCIO ECONOMIC STATUS OF HOUSEHOLD

Name of household head: _____ Head of household education:

Age: _____ (Years) Sex: M/F Occupation:

Highest level of Education in family: _____.

Total number of household:

Adult: _____

Children: _____

Total no of enrolled children in HH: _____

Monthly income: _____ Any other source of Income:

Part 1

Disaster Preparedness and Rehabilitation

1	Do you think your family was well prepared for earthquake 2005?	Yes	No
2	Are you or your family member are aware of first aid?	Yes	No
3	If yes what awareness do you have <input type="checkbox"/> Bandage <input type="checkbox"/> Stitching <input type="checkbox"/> Injection <input type="checkbox"/> BP Measurement Any other please specify _____		
4	Is there any type of disaster preparedness training you got at schools or community level after Earth quake?	Yes	No
5	If yes, then select trainer organization	NGO's	Government organization
			CBO's
6	Duration of training _____Month	_____Days	_____Week
7	Government provided relief after earthquake.	Yes	No
	i. Shelter.		

	ii. Drinking water.		
	iii. Food.		
	iv. Clothes		
	v. Medicines		
	vi. Cash compensation		
8	Have you migrated to other city after earthquake?	Yes	No
9	If yes, in what time you were settled back at your original place_____		
10	After earthquake government provide compensation to rehabilitate at your own place	Yes	No
11	If yes then what amount_____		

Part 2

Post Disaster Satisfaction about Development.

Part (A) Performance of Education. Please enter your intended code in *before and after earthquake* columns. (Select multiple options if necessary)

12	In what type of school your children have been enrolled	Before Earth Quake	After Earth Quake
	i. Government school		
	ii. Private school		
	iii. Madrassa		
	iv. Any other		
13	Are you satisfied with facilities provides at school	Before Earth Quake	After Earth Quake
	i. Yes		
	ii. No		
14	Are you satisfied with teacher teaching style	Before Earth Quake	After Earth Quake

	i. Yes		
	ii. No		
15	Are school administration giving monthly or weekly paper result	Before Earth Quake	After Earth Quake
	i. Yes		
	ii. No		
16	i. Facilities provided at school	Before Earth Quake	After Earth Quake
	ii. Furniture		
	iii. Books		
	iv. Clean water		
	v. Scholarship		
	vi. Washroom		
	vii. Transport		
	viii. Stipend		
	ix. Any Other		

Part (B) Health Performance

17	Are you satisfied with health facilities provided at health center?	Before Earth Quake	After Earth Quake
	i. Yes		
	ii. No		
18	Are doctors easily available in hospitals	Before Earth Quake	After Earth Quake
	i. Yes		
	ii. No		
19	Patient visits to	Before Earth Quake	After Earth Quake

	i. Basic health unit		
	ii. Tehsil head quarter		
	iii. District head quarter		
	iv. Private clinics		
20	Facilities at hospitals of government.	Before Earth Quake	After Earth Quake
	i.		
	ii. Emergency		
	iii. Medicine availability		
	iv. Blood test		
	v. X-rays		
	vi. Operation facilities		
	vii. Gynae operate		
21	How far the hospital is from your residence: _____		

PART C

Infrastructural Improvement

22	Infrastructural improvement	Before Earth Quake	After Earth Quake
	i. Road construction		
	ii. Electricity		
	iii. Sanitation		
	iv. Water supply		
	Communication	Before Earth Quake	After Earth Quake
	a. Mobile		
	b. Radio		

	c. TV-Dish or cable		
	d. Internet		
	e. Newspaper		

Part 3

Reconstruction after Earthquake

23	Was your house damaged in earth quake 2005?	Totally	Partially
24	Structure of your house <input type="checkbox"/> Kacha <input type="checkbox"/> Pakka <input type="checkbox"/> Kacha & Pakka mix		
25	Did NGO's or government organization provide financial assistance in reconstruction of house or repairing?	Yes	No
26	If yes then how much_____		
27	Did government give any design to reconstruct house?	Yes	No
28	If yes, did you construct your house on that design?	Yes	No
29	If yes, did the government monitor the construction process step by step?	Yes	No
30	Are you satisfied with the post-earthquake construction?	Yes	No
31	After shock impact on your house <input type="checkbox"/> Moderate <input type="checkbox"/> Little <input type="checkbox"/> no impact		

Any Suggestion

THANK YOU