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A GEOGRAPHICAL STUDY OF IMPACT OF EARTHQUAKE ON SOCIAL RELATIONS IN AND AROUND PATAN TEHSIL IN SATARA DISTRICT OF MAHARASHTRA

Mr. Sandeep Sampat Tadakhe[1] Dr. C. U. Mane[2]
1. Assistant Professor, Balasaheb Desai College, Patan, Dist. Satara. MH
2. Associate Professor, Head of the Department, Balasaheb Desai College, Patan, Dist. Satara. MH.

Abstract

Earthquake not only effects the economy of the region but also there is impact on society also. One of the major impact of earthquakes on the society, is the impact on the survivors and the population residing in the region. In the cases of long run social impacts, various social relation are spoiled or widened. Earthquake effects on mindset of people in seismic area. The current research paper is aStudy of Impacts of Earthquake on social relations in and around Patan Tehsil in Satara District of Maharashtra. Most of the primary data regarding impact of earthquakes is being collected through field work. E.g. Field visits, Surveying and Interviews to villagers and secondary data collected through the Seismological Dept. Koyna dam. The Chi-Square test is used to check the association between two categorical variables. There is association between earthquake risk zone and social relation or both factors are dependent. As the distance increases from the earthquake risk zonethe impact on social relation lowered.

Key Words: *Social Relations, Earthquake, mindset, risk zone.*

INTRODUCTION:

Earthquake not only effects the economy of the region but also there is impact on society also. One of the major effect of earthquakes on the society is impact on the survivors and the population of the region. In the cases of long run social impacts, various social relation are spoiled or widened. Earthquake effects on psychology of people in seismic area. There is scary situation everywhere and peoples in seismic region are in constant worry, fear, and anxiousness and this anxiety effects on their health. Thousands of children became waifs as their parents are killed in the earthquake. Most of the parents are depressed and the town lost a generation because their children were killed. There is scarcity of social and government facilities due to this there is social

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backwardness seen in the area. Continuous seismicity effects on economy. Due to economic backwardness and less opportunities of employment there is migration in search of employment in other region.

The earthquake effects mostly to social susceptible population. Social susceptibility implies to the incapability of people, organizations, and societies communities to survive adverse impacts from multiple hassle to which they are exposed. These impacts are due in part to characteristics integral in social exchanges, institutions, and systems of cultural values. A socially susceptible community has weak family structures, lack of leadership for decision making and conflict resolution, unequal involvement in decision making, weak or no community associations and the one in which people are differentiated on racial, ethnic, linguistic or religious basis. Disaster awareness is lacking among some of the rural people in the study.

OBJECTIVES:

The present study is based on the following objectives:

- To study the geographical setup of the study area.
- To study the effects of earthquake on social relationin the study area.

STUDY AREA:

The area of study includes five Tehsils, i.e. Patan(Satara), Shirala(Sangli), Shahuwadi (Kolhapur),Chiplun and Sangmeshwer (Ratnagiri) districts in the state of Maharashtra. The study area is earthquake prone region. The study area islocated between 16°43’ North Latitude to 17°53’ North Latitude and 73°19’ East Longitude to 74°13’East Longitude Respectively. Total geographical area of study area is 6416.68 sq. km. in Maharashtra. Patan Tehsil and surrounding region is the constructing part of the Western Ghats. The Study area has Mountain landscapes and Average high temperature 28.8°C, Average low temperature 13.7 °C, Mean temperature range is 24°C . Rainfall in this region averages 3000–4000 mm (120–160 inches). About 200 inches of rainfall with Koyna and Chandoli reserved forest. The distribution of human population is low.

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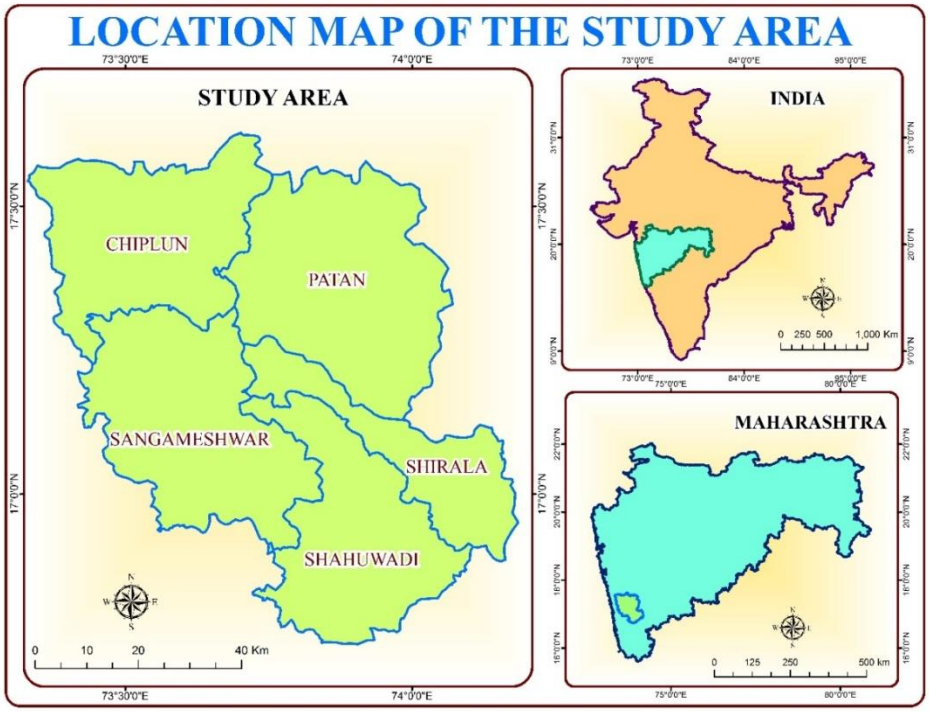
Figure No. 1. Location Map of Study area.



In deficiency of facilities delivered to the people, they are behind in respect of progress in the present world. Almost all population resides in rural areas except i.e. Chiplun, Malkapur, Devrukh city. The high literacy rate is above 70.72 percent recorded at all Tehsils. The most of the Study area is covered by irrigated and non-irrigated farming and the common product is sugarcane and rice crop. The settlements are small in scattered form. Majority of the rural settlements are small up to the size of hamlet. Transport system still has not been developed due to the seismic and hilly character of Study area.

DATABASE & METHODOLOGY:

Maximum primary data about impact of earthquakes on society is being collected through field work. E.g. Field visits, Surveying and Dialogues with local and officials. The secondary data is be collected through related reference books, magazines, published unpublished Articles, journals, and published Govt. Report, District Census hand book, Newspapers, Other media reports and relegated websites. The collected facts is analyzed with The Chi-Square test. It is used to check the association among two definite variables.

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Where, Oi and Ei are studied and probable frequency respectively. 2 follows chi-square dispersal with (r-1) (c-1) degree of freedoms, where r and c are number of rows and columns respectively. We reject the null hypothesis H_0 at α% level of significance if p-value less than equal to. The p-value is a smallest level of significance at which we discard H_0.

The map tables are applied for presenting,and for interpretation which is supportive for getting suitable inferences.

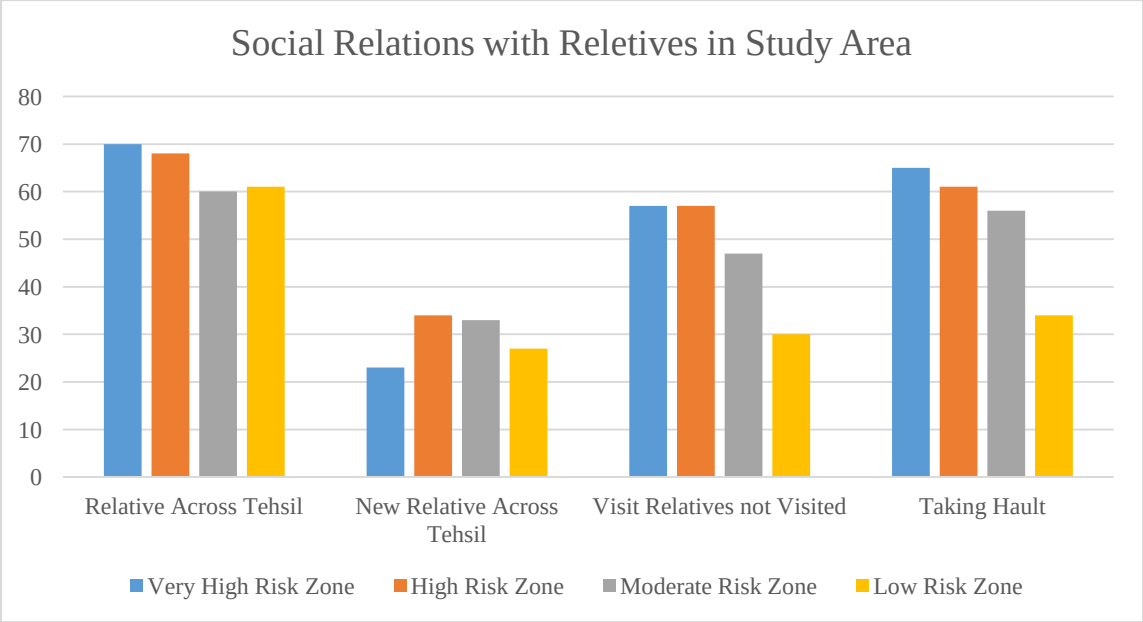
DISCUSSION AND RESULT:

Social relationships brings very specific rewards. It help to live longer. Research has shown that social connections not only impact your mental health, but your physical health as well. They brings emotional, material, and physical health. In terms of emotional rewards social relationship gives broad views about life, emotional support and encouragement in difficult time and gives happiness. There are strong impact of continuous seismicity on social relations in the study area.

Relatives across the Study Area:

Continuous seismicity in the study area effects the social Association and social relationship of the respondents. When questioning about relatives across the study area and out of Tehsil, 35% respondents are admitted that they don't have relatives across the tehsil and 65% respondents had relatives outside the tehsil

Figure No.2. Relatives across the Study Area.



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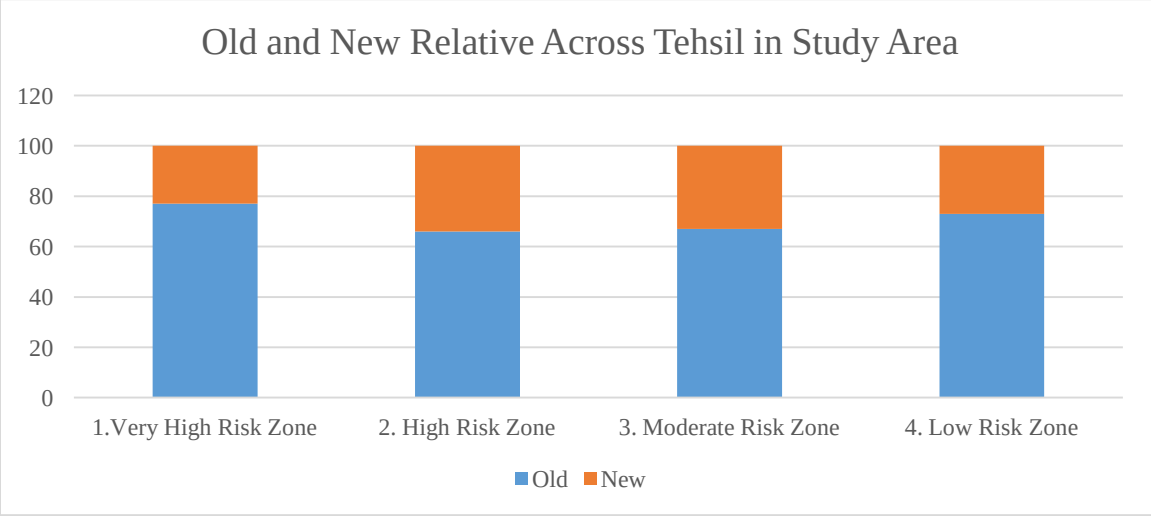
. From these 35% respondent who had no relatives across the study area. While risk zone wise comparing, it is found that in very high risk earthquake zone 30% respondents, in high risk earthquake zone 32% respondents, in moderate risk earthquake zone 40% respondents and in low risk earthquake zone 39% respondents had no relatives outside the study area. It means the Percentage of relatives across the study area is decrease according to increase in earthquake risk.

From above 65% respondents who had relatives across the study area. 64% respondents had old relatives and 36% respondents had new relatives across the study area. While comparing earthquake risk zone wise old and new relatives across the study area, it is found that in very high risk earthquake zone 23% respondents, in high risk earthquake zone 34% respondents, in moderate risk earthquake zone 33% respondents and in low risk earthquake zone 27% respondents had new relatives out of the tehsil. It means according to respondent relatives Percentage of making new distant relatives are less than relatives residing in the study area.

It is also observed that 48% respondent replies that distant relatives are not visited form long time to their kinsfolks in study area,and if they visited to relatives in study area, 57% respondents from very high risk earthquake zone, 57% respondents from high risk earthquake zone, 47% respondents from moderate risk earthquake zone and 33% respondents from in low risk earthquake zone replies that distant relatives are hesitate to visit their house in study area.

Figure No.3. Old and New Relative across Tehsil in Study Area



While asking about distant relatives take halt at their home, 41% respondents admitted that their relatives are being unwilling to take halt at in their house which is in study area. From these

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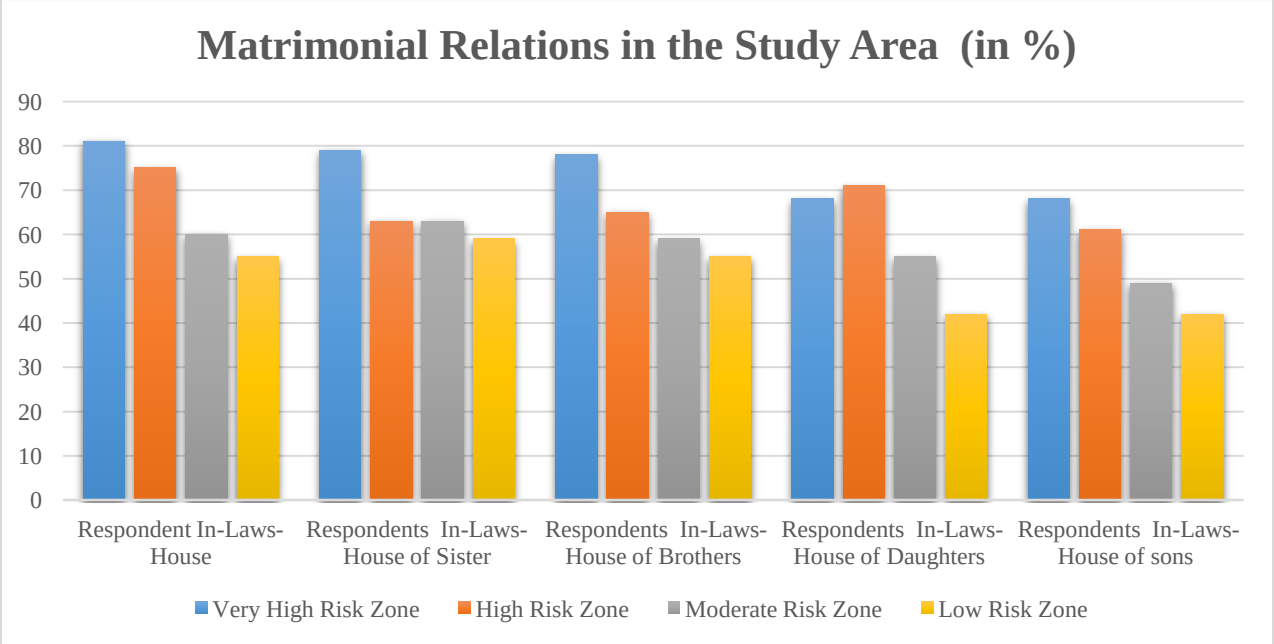
respondent 65% respondents from very high risk earthquake zone, 61% respondents from high risk earthquake zone, 56% respondents from moderate risk earthquake zone and 34% respondents from in low risk earthquake zone. It shows distant relatives are hesitating or feel afraid to stay at their kinsfolks house in earthquake high risk zone in study area.

However as comparing earthquake risk zone wise relatives across the study area, it is observed that the percentage of relatives inside and outside is low in very high risk zone. It means the social relations across the study area is effected by seismicity when the incident of strong earthquake happened in 1967. In early three decades situation relatives across the Tehsil are not maintain relation properly. Relatives are happy to welcome their relatives from study area but afraid to visit their relatives residing in study area and even they afraid to take halt at home, particularly relatives from very high and high risk zones, but the situation is little change from last two decades the percent of new relatives across the study area is slightly increase as the seismicity decreases.

Matrimonial Relations:

Majority of respondent are male, while enquiring about respondents in-laws house, 70% respondents replies that their in –laws house is within the study area. out of these respondent 81% respondents from very high risk earthquake zone, 75% respondents from high risk earthquake zone, 60% respondents from moderate risk earthquake zone and 55% respondents from in low risk earthquake zone said that their in-laws house is inside the Tehsil and 30% replies that their in-laws house is out of the study area.

Figure No. 4.Matrimonial Relations in the Study Area



While asking about in-laws house of their brother, 66% respondent's replies that their in–laws house of brother is within the study area. out of these respondent 79% respondents from very

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high risk earthquake zone, 65% respondents from high risk earthquake zone, 59% respondents from moderate risk earthquake zone and 55% respondents from in low risk earthquake zone said that their in-laws house of their brother is inside the Tehsil and 34% replies that in-laws house of their brother is out of the study area.

On the other hand inquiring about in-laws house of their sister, 66% respondent's answers that in–laws house of their sister is within the study area. out of these respondent 79% respondents from very high risk earthquake zone, 63% respondents from high risk earthquake zone, 63% respondents from moderate risk earthquake zone and 59% respondents from in low risk earthquake zone said that in-laws house of their sister is inside the Tehsil and 34% replies that their in-laws house of their sister is out of the study area.

However inquiring in-laws house of their son, 58% respondent's answers that in–laws house of their son is within the study area. out of these respondent 68% respondents from very high risk earthquake zone, 61% respondents from high risk earthquake zone, 49% respondents from moderate risk earthquake zone and 42% respondents from in low risk earthquake zone said that in-laws house of their son is inside the Tehsil and 42% replies that in-laws house of their son is out of the study area.

Although the question about in-laws house of their daughters, 63% respondent's answered that in–laws house of their sister is within the study area. out of these respondent 68% respondents from very high risk earthquake zone, 61% respondents from high risk earthquake zone, 49% respondents from moderate risk earthquake zone and 42% respondents from in low risk earthquake zone said that in-laws house of their daughters is inside the Tehsil and 37% replies that in-laws house of their daughters is out of the study area.

Its results that the seismicity impacts the matrimonial relations in study area majority (more than 55%) of matrimonial relations are made with in the study area. it shows that people are hesitate to make matrimonial relations in study area. people like to have daughter-in-law from the study area but falter to have son-in-law from the study area.

While compering earthquake risk zone and Impact on social relation,Here Chi-Square Test Value is 4.185, where P value = 0. 242. P-value>0.05 and it indicate that accept the null hypothesis H_0 at 5% level of significance. That is, there is no association between earthquake risk zone and Old or New Relative across study region or both factors are independent.

Conclusion:

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The continuous earthquakes effect on the social relations in study area. In the f long run social impacts, various social relation are spoiled or widened. Earthquake effects on mindset of people in and around seismic area. There is worrying situation in peoples in and around seismic region.However as comparing earthquake risk zone wise relatives across the study area, it is observed that the percentage of relatives inside and outside is low in very high risk zone. It means the social relations across the study area is effected by continuous seismicity People are hesitate to make matrimonial relations in study area. People like to have daughter-in-law from the study area but falter to have son-in-law from the study area.

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