CHAPTER 8
DATA COLLECTED IN FIELD SURVEY

8.1 INTRODUCTION
Despite all the difficulties while collecting data during field survey, which the researcher was able to surmount due to her dedicated and motivated approach, the outcome of the survey was a welcome sign, as out of 600 questionnaires, 528 respondents answered the questionnaire. This comes to 88% success rate, which is considered fairly adequate sample for analysis. This chapter gives out the factual data collected through the field survey.

8.2 PERSONAL DATA OF RESPONDENTS
8.2.1 NAME, SEX & AGE - The first question related to the name of the respondent to identify him/her. The second question related to the sex of the respondent. Out of 528 respondents, 345 were males (84%) and 183 were females (36%). The data has been tabulated separately for the males and females to find the gender biased responses. The third question was the age of the respondent. The respondents were aged between 15 and 70 years. However, as the respondents above 40 years were very less, they were bracketed into three age groups – 15 to 25 years, 25 to 35 years and 35 years and above (Figure No 8.1).
8.2.2 EDUCATIONAL QUALIFICATIONS - Educational qualifications of the respondents were also solicited. At the time of analysis of the data, it was found that most of the respondents were undergraduate. Out of 345 male respondents 82 were graduate and out of 183 female respondents, 33 were graduates. Details of their educational background are illustrated in Figure No 8.2:

**FIGURE 8.2: EDUCATIONAL QUALIFICATION OF THE RESPONDENTS**
8.2.3 LIVING ENVIRONMENT - East Delhi District being part of the National Capital Territory of Delhi, 364 (257 males and 107 females) respondents were residing in authorized colonies, however 164 (88 male and 76 females) respondents also reported that they were still residing in unauthorized colonies. 155 males and 93 females were residing in congested areas and 190 males and 90 females were living in open and planned areas. When asked about the type of residential building structure, most of the respondents, both males and females, reported that they were living in concrete structures. The details are illustrated in Figures 8.3 & 8.4.

FIGURE 8.3: TYPE OF RESIDENTIAL BUILDING STRUCTURES – FEMALE
8.2.4 PROFESSION OF RESPONDENTS - As regards the profession of the respondents, out of 345 males, 56 were government employees (including 26 from Civil Defence), 87 private employees, 66 self-employed and 136 students. Out of 183 female respondents, 25 were government employees, 32 were private employees, 19 were self-employed, 87 were homemakers and 20 were students. While giving the contact details, it was observed that very few had email addresses. However, almost all of them had at least one mobile phone, some even had more than one mobile phone.

8.3 UNDERSTANDING DISASTERS
On the question if they knew the meaning of disaster, 286 males and 156 females replied in the affirmative and 59 males and 27 females replied in the negative. However, when asked to write about the meaning of disaster in one line, most of them did not write and those who ventured to answer, gave vague replies like, ‘disaster is a national problem’, ‘bomb in Red Fort is a disaster’ etc.
8.3.1 AGE OF LEARNING ABOUT DM - During the field survey and while tabulating the data obtained during this survey, it was observed that most of the respondents came to know about the disaster management at the age of 15 years or even before attaining this tender age.

Details of age at which they came to know about the subject of disaster management have been depicted in Figures 8.5 & 8.6. It is evident from the analysis of the responses that School Education had played a significant role in spreading the awareness about the disaster management.

**FIGURE 8.5: AGE AT WHICH THEY CAME TO KNOW ABOUT DISASTER MANAGEMENT – FEMALE**
8.3.2 SOURCES OF LEARNING ABOUT DM. - Sources of learning about the disaster management is also a very important parameter to understand its importance. Hence, in a structured question and during schedule data collection by enumerators, the respondents were asked to give their responses regarding the source of learning about disaster management. A very high number of male respondents were ignorant about the concept of disaster management. 81 male respondents and 25 female respondents were of the view that they did not know anything about the disaster management. However, most of the respondents (80 females and 106 males) received the knowledge about disaster management at school level (Figures 8.7 & 8.8). Comparative analysis of responses of the female and male respondents is given at Figure 8.9.
FIGURE 8.7: SOURCE OF LEARNING ABOUT DISASTER MANAGEMENT – FEMALE RESPONDENTS
FIGURE 8.8: SOURCES OF LEARNING ABOUT DISASTER MANAGEMENT – MALE RESPONDENTS

Source of learning about Disaster Management - Male Respondents

FIGURE 8.9: SOURCE OF LEARNING ABOUT DISASTER MANAGEMENT – COMPARATIVE ANALYSIS OF MALE AND FEMALE RESPONDENTS
9.3.3 FORMAL VS INFORMAL LEARNING - Besides formal education at school level, knowledge about disaster management can also be gained at graduate and post graduate levels. Even it can be understood by attending special lectures and demonstrations. Through such modes of informal education, capacity of the community on disaster management can be developed. However, 207 male respondents (mostly self-employed and business men) said that they never had a formal qualification and training on disaster management (Figures 8.10 & 8.11).
8.3.4 PERSONAL EXPERIENCES - Best lessons are learnt through personal experience. In order to know about personal experiences of respondents, of encountering any natural or man-made disaster, 183 males and 67 females had encountered man-made disasters, 37 males and 139 females had experienced natural disasters. 170 males and 77 females did not reply to the question. Those who had replied for the man-made disasters experience, gave mostly the answers of having seen either fire or road accidents. As regards to those who had experienced natural disasters, mostly had seen only floods, with a few having felt an earthquake.

Knowledge of disasters which can occur in the District is an important input for working out training modules. Answering the question, 150 males and 108 females said that floods, accidents or building collapse were the only disasters which could happen in the District. 195 males and 75 females did not answer the question.

Similarly knowledge of seismic zone in which the District was located was an important input, only 48 females and 128 males gave the correct answer of East Delhi District being in seismic Zone IV. Some even graded it in Zone II and V also. In fact 173 males and 100 females gave no answer; presumably they did not have any idea of zoning areas for earthquake disaster.

8.4 MITIGATION

8.4.1 DM PLANS & SOPs - For efficient management of disasters, DM Plans and SOPs are required to be formulated at all levels, from State, to local and even at house-hold level. In answer to the question, if they had a family disaster management plan, 278 males (out of 345 males) and 146 females (out of 183 females) said that they did not have any such plan. However, 31 males and 37 females said that they had family disaster management plan. Those not having family disaster management plan, however, agreed that there was a need to have a family disaster management plan. The family disaster management plan prepared by 31 males and 37 females did not have any standardized format for such a plan. Some howlers were that the family disaster management plan means, ‘while constructing the house – the building plan should be approved from MCD’.
8.4.2 SAFE CONSTRUCTIONS - All the structures have to be constructed as per the National Building Code (NBC). A question was put across to the respondents if they knew the houses they were living in, had to be constructed as per the NBC. 214 males and 103 females replied positively, 131 males and 80 females replied that they did not know anything about NBC. Out of 131 males and 80 females who gave negative answers responded positively for taking measures to strengthen their buildings. In reply as to who would take the initiative of strengthening their houses, their responses were as follows:

<table>
<thead>
<tr>
<th>Category</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Structural Engineer</td>
<td>121</td>
<td>72</td>
</tr>
<tr>
<td>Architect</td>
<td>27</td>
<td>29</td>
</tr>
<tr>
<td>Electrical/ Mechanical Engineer</td>
<td>18</td>
<td>5</td>
</tr>
<tr>
<td>Mason</td>
<td>15</td>
<td>12</td>
</tr>
<tr>
<td>Contractor</td>
<td>29</td>
<td>2</td>
</tr>
<tr>
<td>Did not Reply</td>
<td>135</td>
<td>63</td>
</tr>
</tbody>
</table>

8.4.3 MITIGATING EARTHQUAKES - The East Delhi District is highly vulnerable to Earthquake disaster, being in seismic Zone IV. The people must be aware about the measures to mitigate the impact of this hazard. Some of the measures, listed in the questionnaire helped the respondents to understand the mitigation measures to give their views. Some of the measures given in the questionnaire were, ‘anchor movable items, prepare family disaster management kits, have a common contact outside Delhi, brief family members what to do during earthquake tremors and after major shocks, switch off electricity mains/ water/ gas connections, etc’. Nearly 112 female responders and 228 male responders were of the view that they need to adopt all the above mentioned measures to protect themselves from the ill effects of an earthquake, whenever it occurs (Figures 8.12 & 8.13).
FIGURE 8.12 – MEASURES TO BE TAKEN TO PREPARE FOR THE EARTHQUAKE DISASTER - FEMALE

Measures to be taken to prepare for Earthquake - Female

- Anchor Movable Items: 1
- Prepare Family DM kits: 33
- Have a common contact outside Delhi: 19
- Brief family members what to do during eq tremors and after main shocks: 0
- Switch off electricity mains/ water/ gas connections: 8
- All of Above: 0
- None: 112

FIGURE 8.13: MEASURES TO BE TAKEN TO PREPARE FOR EARTHQUAKE DISASTER - MALE

Measures to be taken to prepare for EQ - Male

- Anchor Movable Items: 88
- Prepare Family DM kits: 10
- Have a common contact outside Delhi: 5
- Brief family members what to do during eq tremors and after main shocks: 14
- Switch off electricity mains/ water/ gas connections: 228
- All of Above: 0
- None: 0
The responses in a tabulated form are given below:

<table>
<thead>
<tr>
<th>Category</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anchor Movable Items</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Prepare Family Kit</td>
<td>10</td>
<td>5</td>
</tr>
<tr>
<td>Have a common contact outside Delhi</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Brief Family Members</td>
<td>14</td>
<td>19</td>
</tr>
<tr>
<td>Switch off Electrical Mains</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>All the above</td>
<td>228</td>
<td>112</td>
</tr>
<tr>
<td>No reply</td>
<td>82</td>
<td>38</td>
</tr>
</tbody>
</table>

8.4.4 FAMILY DM KIT - As the first responders themselves get affected in a disaster, they would take time to come to the aid of the affected community, who should remain self-sufficient for 24 hours, for which period they should have a family disaster management (DM) kit. To the number of family DM kits which a family should have, 73 males and 21 females said that there should be one kit while as 148 males and 88 females said that there should be two kits. 124 males and 74 females did not know about the family disaster management kits. As to, if they knew about the contents of the family disaster management kit, 121 males and 69 females replied affirmatively. 88 males and 50 females did not know about the contents of the family disaster management kit. 138 males and 64 females did not answer this query. In answer to list out at-least five items of DM kit, 47 males and 50 females could list out only up to three items. 77 males and 57 females could describe 4-5 items and 221 males and 76 females could not list out even one item.

8.4.5 EMERGENCY CONTACT NUMBERS - Knowledge of emergency contact numbers is a must for any awakened community, so that they could intimate soon after a disaster takes place, without losing any precious time. People should be fully aware about whom to inform in case of man-made disasters. Although various stakeholders are there to respond to such disasters, however the information should be provided to right kind of stakeholders in the shortest possible time. Various stakeholders in disaster response are – Police, Fire & Emergency Services, District Disaster Management Control Room, Ambulance Services etc. Most of the responders, both
females and males, were of the view that they would inform all of the above, in case of any man-
made disaster, in future (Figure 8.14 & 8.15).

**FIGURE 8.14 – WHO ALL TO INFORM IN CASE OF MAN-MADE DISASTER– FEMALE**

![Pie chart showing responses of females to whom to inform in case of man-made disaster.]

**FIGURE 8.15 – WHO ALL TO INFORM IN CASE OF MAN-MADE DISASTER – MALE**

![Bar chart showing responses of males to whom to inform in case of man-made disaster.]

In response to the question if they knew about the phone number to call up, in case there was women related disaster, 95 males and 82 females replied that they knew the emergency
contact number. 148 males and 68 females replied that they were not aware about the phone number, 102 males and 33 females did not answer the question either way. When asked if they knew the phone number when there was a senior citizen related disaster, 110 males 78 females replied positively, 114 males and 77 females replied that they did not know the telephone number and 81 males and 28 females did not give any answer.

**8.4.6 RESIDENT WELFARE ASSOCIATIONS (RWAs)** - RWAs play a significant role in the mitigation and management of disasters. To the question on the existence of RWAs, in their locality, 177 males and 102 females gave a ‘yes’ answer, 75 males and 58 females said that there was no RWA in their locality. 93 males and 23 females did not reply, presumably they did not know whether they were existing or not. 128 males and 73 females said their RWA had a Disaster Management Plan. 114 males and 62 females said they (RWAs) did not have disaster management plan. 111 males and 38 females did not reply to this question. In response to the question if their RWA had any disaster response teams, like early warning, search and rescue, first aid, etc., 117 male and 40 females replied ‘yes’, 103 males and 85 females replied ‘no’, 125 males and 57 females did not answer.

The question put across was if their resident welfare associations were conducting mock exercises, 123 males and 81 females replied positively and 222 males and 102 females replied that either they were not conducting the mock exercises or did not know about it. 20 males and 57 females said that the mock exercises were conducted regularly and the remaining said that either they were not conducted regularly or did not know about it.

**8.4.7 PARTICIPATION IN MOCK EXERCISES** - Practice makes a man perfect. This saying is also applicable for the disaster management. Only imparting training will not solve the purpose, people need to be well versed with all aspects of disaster management which should be enshrined in DM Plan. This DM Plan to be workable needs to be reviewed and tested through regular mock exercises, to find the gaps and to bridge them after every mock exercise or after every disaster. Designated agencies should conduct such trainings at regular intervals. People also should take part in such drills as volunteers or even attend them as mere spectators. Even by attending or witnessing such drills one can learn a lot. However, only 55 out of 183 female
responders and 90 out of 345 male responders had taken active part in such exercises (Fig 8.16 & 8.17). Their participation need to be increased to make community fully aware about DM.

**FIGURE 8.16 : ROLE PLAYED DURING MOCK DRILLS– FEMALE**

**FIGURE 8.17 : ROLE PLAYED DURING MOCK DRILLS –MALE**
When the responders were asked to give brief lessons they learnt from these mock exercises, most of them either did not answer or gave some vague replies.

8.5 PREPAREDNESS

8.5.1 ROLE OF COMMUNITY - It is a well-known fact that the community is the first affected and also the first responder to any disaster. A question was put across to the respondents to know their opinion. 203 males and 127 females replied that they knew that this was a fact. 31 males and 16 females said that the community was not the first responder and 111 males and 30 females did not answer the question. To the structured question, if there was a need to impart formal training in disaster management to the community, 224 males and 145 females gave a positive answer, 90 males and 8 females gave a negative answer, while-as, 91 males and 39 females gave no answer.

8.5.2 CAPACITY DEVELOPMENT - Disaster management is a holistic concept which comprises not only the response & relief but preparedness, prevention and mitigation also. 140 male responders and 91 female responders were also of the view that capacity development should focus on all the phases of disaster management cycle (Figures 8.18 & 8.19).

FIGURE 8.18: CONTENTS OF FORMAL TRAINING – FEMALE

![Contents of the Formal Training should be - Female](image-url)
8.5.3 AGENCIES FOR TRAINING - Different agencies are involved in imparting training to community regarding disaster management. However, the real and effective training can be imparted only by the experts in this field. 131 male responders and 87 female responders were also of the similar view. However, ignorant responders (who did not know about disasters and disaster management) did not answer this question. Figures 8.20 & 8.21 throw light on the responses of the people.

FIGURE 8.20: WHO SHOULD IMPART DM TRAINING – FEMALE
8.5.4 TRAINING EXPENDITURE - Imparting training involves fiscal expenditure. General perception about disaster management amongst community was that only government was the stakeholder and should take all the initiatives related to disasters. However, it is not correct, the community itself is the stakeholder and hence it is the responsibility of the community to come forward and get trained on disaster management. Investment on imparting such training should not only be one stakeholder’s responsibility; it should be the responsibility of all stakeholders. Hence with the collective efforts, a better training programme can be organized. Responders were also of the view that all the stake-holders – community, district authorities, corporate sector etc. should contribute for imparting such capacity development programs (Figures 8.22 & 8.23).
FIGURE 8.22: WHO SHOULD FINANCE DM TRAINING – FEMALE

Who should Finance such Training - Female

- Contribution from Community
- District Authorities
- Sponsored from Corporate Sector
- All of them
- More than One
- None

FIGURE 8.23: WHO SHOULD FINANCE DM TRAINING – MALE

Who should Finance such Training - Male
8.5.5 CHALLENGES IN TRAINING OF COMMUNITY - Since community is the first victim and even the first responder in disasters, they need to be properly trained. However, it is very difficult to find a time which suits most of the members of any community. Keeping this challenge in mind, during the field survey, a question was posed to the respondents about their choice or suitability of time for imparting such a training. Most of the responders (75 female responders and 102 male responders) were in favour of imparting such capacity development programs at separate timings for different sets of people, as given in Figures 8.24 & 8.25: 

**FIGURE 8.24 – BEST TIME TO IMPART DM TRAINING TO THE COMMUNITY–FEMALE**

![Pie chart showing best time to impart training to the community for females.](chart.png)

- **On Week-ends**: 75
- **During holidays**: 31
- **In Evening hours**: 28
- **In Morning Hours**: 20
- **Separate timing for different stakeholders**: 22
- **None**: 1
8.5.6 TRAINING ON DM IN SCHOOLS - Most of the respondents were of the view that the training and awareness on the disaster management in the schools should be part of all the three – as part of curriculum, as one time activity and academic & practical training through disaster management experts in organized programmes (Figures 8.26 & 8.27).
Duration of training on disaster management being provided in the schools is one of the important factors. It was observed that most of the schools provide training on disaster management for about one day. However, 86 female respondents desired that duration of such type of training should be increased by at least two days, making it a three days capsule/module. 100 male respondents also were of the view that such training programmes should be at least for three days. The details of the responses are depicted in Figures 8.28 & 8.29.

**FIGURE 8.27: METHOD OF TRAINING/ AWARENESS TO BE IMPARTED IN SCHOOLS – MALE**

**FIGURE 8.28: DURATION OF TRAINING ON DM IN SCHOOLS - FEMALE**
8.5.7 EVALUATION OF SYSTEM OF DM TRAINING IN SCHOOLS - As observed earlier, most of the respondents who attained some knowledge about disaster management, had mostly received it in their respective schools. So, to enquire about whether the present system of providing education about disaster management in schools of Delhi was good enough, was necessary at the time of field survey. The analysis of responses to this particular question can prove pivotal for further awareness programmes to be launched by different Government and non-governmental organizations. 122 females and 167 males were not satisfied with the present system of education on disaster management in the schools of Delhi (Figures 8.30 & 8.31).
FIGURE 8.30: IS PRESENT SYSTEM OF IMPARTING DM TRAINING IN DELHI SCHOOLS GOOD ENOUGH – FEMALE

Is present System in Delhi Schools good enough - Female

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
<th>None</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>24</td>
<td>122</td>
<td>37</td>
</tr>
</tbody>
</table>

FIGURE 8.31: IS PRESENT SYSTEM OF IMPARTING DM TRAINING IN DELHI SCHOOLS GOOD ENOUGH – MALE

Is present System in Delhi School good enough - Male

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
<th>None</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>107</td>
<td>71</td>
<td>167</td>
</tr>
</tbody>
</table>
Most of the respondents were of the view that following inputs were necessary for preparing a better syllabus for understanding disaster management:

- Academic inputs of perceived disasters in Delhi.
- Academic inputs of all types of disasters in India.
- Conduct of two mock exercises in Schools, every year, be made compulsory.
- Hold seminars where experts should be called to interact with students.

114 out of 183 female responders and 149 out of 345 male responders were of the view that all the above inputs, if included, in the disaster management curriculum at the school level, would improve the awareness and training status of the recipients (Figures 8.32 & 8.33).

**FIGURE 8.32: ADDITIONAL INPUTS TO BE ADDED IN DM SYLLABUS – FEMALE**

![Pie chart showing additional inputs to be added in the DM Syllabus for female responders.](image)
8.5.8 TRAINING OF WORKING CLASS - For the working people, they need to be trained at their respective work places itself, because disaster can strike anywhere, any day and any time. 119 female responders and 182 male responders (Figures 8.34 & 8.35) desired that the training in disaster management should also be imparted at work places (offices/shopping area/industrial areas/hospitals/educational institutions/malls) which must include the following:

- Hold seminars/ lectures by experts, periodically.
- Every work place should have Disaster Management plan and everyone should know their roles and responsibilities.
- Conduct mock exercises regularly.
FIGURE 8.34: HOW SHOULD THE TRAINING ON DM BE IMPARTED AT WORKPLACE – FEMALE

![Diagram showing how training on DM should be imparted at the workplace for female responders.]

- 119 respondents
- 29 held seminars/lectures by experts, periodically
- 15 conducted mock exercises regularly
- 10 have every workplace DM plan and everyone knows their task/role
- 9 hold seminars/lectures by experts, periodically and conducted mock exercises regularly
- 10 have every workplace DM plan and everyone knows their task/role and conducted mock exercises regularly
- 119 have all of the above
- 10 have none of the above
- 10 have more than one of the above

FIGURE 8.35: HOW SHOULD THE TRAINING ON DM BE IMPARTED AT WORKPLACE – MALE

![Diagram showing how training on DM should be imparted at the workplace for male responders.]

- 182 respondents
- 93 held seminars/lectures by experts, periodically
- 41 conducted mock exercises regularly
- 16 have every workplace DM plan and everyone knows their task/role
- 10 have every workplace DM plan and everyone knows their task/role and conducted mock exercises regularly
- 5 have seminars/lectures by experts, periodically and conducted mock exercises regularly
- 16 have all of the above
- 10 have none of the above
- 10 have more than one of the above
8.5. 9 TRAINING OF RETIRED PERSONS AND HOUSEWIVES - Community comprises of retired persons, small children, office/ factory goers, shopkeepers and house wives. They are the first responders as well as the first sufferers in any disasters. Therefore, their training in disaster management is instrumental in making the community disaster resilient and completely aware. The mode of their training should include – conducting general awareness programmes at the RWA level; organizing mock exercises and by screening films/ documentaries on disaster management at convenient timings. 109 females and 187 male respondents were of the view that all the above mitigation and preparedness activities should be pursued (Figures 8.36 & 8.37).

FIGURE 8.36: MODE OF TRAINING TO BE IMPARTED TO RETIRED PERSONS/ HOUSE WIVES – FEMALE
FIGURE 8.37: MODE OF TRAINING TO BE IMPARTED TO RETIRED PERSONS/ HOUSE WIVES – MALE

How should the training be imparted to Retired persons/ House Wives - Male

- By conducting general awareness programme at RWA level: 65
- By organizing mock exercises periodically: 24
- By screening films/ documentaries on DM: 18
- All of Above: 187
- None: 8

8.6 ROLE OF MEDIA IN SPREADING GENERAL AWARENESS

Advertisement through electronic and print media as well as through cable channels can also play a very pivotal role in spreading the message of disaster management at the community level. 38 female respondents were of the view that electronic media can spread general awareness about disaster management at community level, whereas, 92 male respondents were of the view that cable channels were better medium for achieving the goal. Detailed observations of people’s response can be derived from the Figures 8.38 & 8.39.
FIGURE 8.38: BEST METHODS OF SPREADING AWARENESS AT COMMUNITY LEVEL – FEMALE

What are the best method of spreading mass general awareness at community level - Female

FIGURE 8.39: BEST METHODS OF SPREADING AWARENESS AT COMMUNITY LEVEL – MALE

What are the best method of spreading mass general awareness at community level - Male
8.7 CONCLUSION
The raw data collected during the field survey was rich in content and context. Many a revealing facts came to light which when analysed professionally helped in finding gaps and search for solution to make the community more resilient to face disasters squarely.