PREPAREDNESS OF NCC CADETS IN DISASTER MANAGEMENT

MSW DISASTER MANAGEMENT

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ABSTRACT

Disaster management is a vital component of disaster risk reduction, and trained youth volunteers play an important role in enhancing community resilience. The National Cadet Corps (NCC), as one of India's largest uniformed youth organizations, contributes to disaster management through awareness programmes, community service, first aid, and emergency response activities. However, limited empirical evidence exists regarding the actual preparedness of NCC cadets to respond effectively during disasters. This study assessed the preparedness of NCC cadets in disaster management by examining their knowledge, attitudes, skills, the influence of NCC training, their roles in recent disaster events, and the gaps between NCC training and community disaster management needs.

A quantitative research design was adopted. Primary data were collected from 71 NCC cadets using a self-structured questionnaire consisting of seven sections covering demographic characteristics, disaster management knowledge, attitude, practical skills, influence of NCC training, involvement in disaster events, and perceived training gaps. The collected data were analysed using IBM SPSS Statistics Version 22 through frequencies, percentages, pie charts, and cross-tabulations. The findings indicate that while NCC cadets generally possess positive attitudes towards disaster preparedness and acknowledge the value of NCC training, significant deficiencies exist in practical disaster management skills. A large proportion of respondents demonstrated inadequate practical preparedness, indicating a need for greater emphasis on hands-on learning, mock drills, simulation exercises, search and rescue training, first aid, and community-based disaster management activities.

The study concludes that strengthening practical training components and improving alignment between NCC disaster management modules and community needs can enhance the preparedness of NCC cadets. The findings provide useful insights for the National Cadet Corps, educational institutions, disaster management authorities, and policymakers in designing more effective disaster preparedness programmes and promoting youth participation in disaster risk reduction.

Keywords: Disaster preparedness, National Cadet Corps (NCC), Disaster Management, Youth Participation, Community Resilience.

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CHAPTER I
INTRODUCTION

1.1 INTRODUCTION

Disasters have emerged as one of the most significant challenges confronting societies across the world. The frequency, intensity, and complexity of disasters have increased considerably in recent decades due to factors such as climate change, environmental degradation, rapid urbanization, population growth, and unplanned development. Natural hazards such as floods, cyclones, landslides, droughts, earthquakes, and heat waves continue to affect millions of people annually, causing loss of life, destruction of property, disruption of livelihoods, and long-term socio-economic consequences. According to the United Nations Office for Disaster Risk Reduction (UNDRR, 2015), disaster losses are increasing globally, highlighting the urgent need for effective disaster risk reduction strategies and preparedness measures. The growing occurrence of disasters has shifted global attention from reactive disaster response towards proactive disaster preparedness, resilience building, and risk reduction.

Disaster management refers to the systematic process of planning, organizing, coordinating, and implementing measures to prevent, mitigate, prepare for, respond to, and recover from disasters. It encompasses a range of activities aimed at reducing vulnerabilities and enhancing the capacity of individuals, communities, and institutions to cope with hazards effectively. The disaster management cycle is commonly divided into four phases: mitigation, preparedness, response, and recovery. Among these phases, preparedness occupies a crucial position because it focuses on developing the knowledge, skills, capacities, and resources required to respond effectively when disasters occur (UNDRR, 2015). Preparedness helps minimize disaster impacts, facilitates timely response, and strengthens community resilience. Research has consistently demonstrated that communities with higher levels of preparedness are better equipped to manage emergencies and recover more quickly from disaster events (Paton, 2003).

Contemporary approaches to disaster management increasingly emphasize community participation and local capacity building. Governments and disaster management agencies recognize that disaster resilience cannot be achieved solely through institutional interventions; rather, it requires the active involvement of communities and local stakeholders. Community-based disaster management approaches encourage local participation in preparedness planning, risk assessment, awareness generation, and

response activities. Volunteers play an important role in this process by supporting preparedness initiatives, assisting during emergencies, and facilitating communication between communities and disaster management authorities (International Federation of Red Cross and Red Crescent Societies [IFRC], 2020). As disasters often overwhelm formal response systems, trained community volunteers become valuable assets in enhancing local preparedness and response capacities.

Within this context, youth have gained increasing recognition as important contributors to disaster risk reduction and community resilience. Traditionally viewed as vulnerable populations during disasters, young people are now increasingly acknowledged as active agents of change capable of contributing to preparedness, awareness creation, risk communication, and emergency response. The Sendai Framework for Disaster Risk Reduction 2015–2030 specifically highlights the importance of meaningful youth participation in disaster risk reduction initiatives and recognizes young people as key stakeholders in building resilient communities (UNDRR, 2015). Their energy, adaptability, leadership potential, and ability to mobilize communities position them as valuable resources in disaster preparedness and response activities.

In India, youth participation in disaster management is facilitated through various educational and volunteer organizations, among which the National Cadet Corps (NCC) occupies a prominent position. Established under the National Cadet Corps Act of 1948, NCC is one of the largest uniformed youth organizations in the world. Functioning under the Ministry of Defence, the organization aims to develop character, discipline, leadership, secular outlook, spirit of adventure, and ideals of selfless service among young citizens (Directorate General NCC, 2024). In addition to its role in youth development and nation-building, NCC actively promotes community service and social responsibility through various programmes and activities.

Over the years, NCC has increasingly contributed to disaster management initiatives across the country. NCC cadets have participated in relief operations, rehabilitation activities, awareness campaigns, environmental conservation programmes, and community preparedness initiatives during disasters such as floods, cyclones, landslides, and public health emergencies. The involvement of NCC cadets during events such as the Kerala floods of 2018, Cyclone Amphan, Cyclone Fani, and the COVID-19 pandemic has demonstrated the potential of organized youth volunteers in

supporting disaster management efforts (Ministry of Defence, 2021). These experiences have reinforced the perception of NCC as a valuable auxiliary resource capable of contributing to disaster preparedness and disaster response activities.

To enable such participation, NCC training incorporates elements that are relevant to disaster management. Cadets are exposed to activities related to first aid, leadership development, teamwork, communication, community service, environmental awareness, and emergency preparedness. Through institutional training, camps, drills, and practical exercises, NCC seeks to develop competencies that can be applied in emergency situations. These training experiences have the potential to enhance preparedness by improving disaster-related knowledge, fostering positive attitudes towards community service, and developing practical skills required during emergencies (Directorate General NCC, 2024).

Despite the recognized role of NCC in disaster management, limited empirical evidence exists regarding the actual preparedness of NCC cadets to contribute effectively to disaster preparedness and disaster risk reduction efforts. While several reports document the participation of NCC cadets in disaster response activities, relatively few studies have systematically assessed their preparedness levels. Preparedness is a multidimensional concept that includes knowledge, attitudes, and skills, all of which influence an individual's ability to respond effectively during emergencies. Furthermore, there is limited understanding of how NCC training contributes to preparedness outcomes and whether existing training adequately addresses community disaster management needs.

The increasing frequency of disasters, particularly in disaster-prone regions such as Kerala, has heightened expectations regarding the role of trained youth volunteers in supporting disaster management activities. As communities and disaster management agencies continue to emphasize preparedness and resilience building, it becomes important to assess the capacity of NCC cadets to contribute meaningfully to these efforts. Evaluating their preparedness can provide insights into the strengths and limitations of existing training programmes, identify areas requiring improvement, and contribute to the development of more effective disaster preparedness strategies.

Against this backdrop, the present study seeks to examine the preparedness of NCC cadets in disaster management. Specifically, the study focuses on understanding the

current level of disaster preparedness among NCC cadets in terms of knowledge, attitudes, and skills; examining the influence of NCC training on preparedness; exploring the roles performed by cadets during disaster events; and identifying gaps between NCC training and community disaster management needs. Through this investigation, the study aims to contribute to the growing body of knowledge on youth participation in disaster management and provide insights that may strengthen the role of NCC in disaster preparedness and disaster risk reduction initiatives.

1.2 STATEMENT OF THE PROBLEM

The increasing occurrence of natural and human-induced disasters has emerged as a major challenge to communities worldwide. Climate change, environmental degradation, rapid urbanization, and population growth have contributed to the rising frequency and intensity of disasters such as floods, cyclones, landslides, droughts, and extreme weather events. These disasters not only result in loss of life and property but also disrupt livelihoods, infrastructure, and social systems. In response to these challenges, disaster management has increasingly shifted from a reactive approach focused on emergency response to a proactive approach emphasizing disaster risk reduction, preparedness, and community resilience (UNDRR, 2015).

Preparedness is widely recognized as a critical component of disaster management because it enhances the ability of individuals and communities to anticipate, respond to, and recover from disasters effectively. Contemporary disaster management frameworks emphasize the importance of community participation and local capacity building in strengthening preparedness. As disasters often exceed the capacities of formal response agencies, trained volunteers and community members play an essential role in supporting preparedness initiatives and emergency response activities (IFRC, 2020).

Youth are increasingly recognized as important stakeholders in disaster risk reduction and community resilience. Their energy, adaptability, leadership potential, and ability to mobilize communities make them valuable contributors to disaster preparedness and response efforts. In India, the National Cadet Corps (NCC) serves as one of the largest organized youth organizations involved in community service and nation-building activities. Through various training programmes, camps, and social service initiatives, NCC seeks to develop qualities such as discipline, leadership, teamwork, and civic

responsibility among cadets. In recent years, NCC cadets have participated in disaster-related activities including awareness campaigns, flood relief operations, rehabilitation programmes, and emergency support services during disasters across the country.

The increasing involvement of NCC cadets in disaster management has generated expectations regarding their ability to contribute effectively to disaster preparedness and disaster risk reduction efforts. NCC training includes components related to first aid, community service, leadership development, emergency preparedness, and disaster awareness. However, participation in disaster-related activities alone does not necessarily indicate preparedness. Effective disaster preparedness requires adequate knowledge of disaster risks and response procedures, positive attitudes toward disaster management responsibilities, and practical skills necessary for emergency situations.

Although NCC is frequently recognized for its contributions during disasters, limited empirical research has examined the preparedness of NCC cadets to undertake disaster management responsibilities. Existing literature largely focuses on the participation of NCC cadets in relief and rehabilitation activities, while relatively little attention has been given to assessing their preparedness levels. Furthermore, there is insufficient evidence regarding the extent to which NCC training influences disaster preparedness and whether the knowledge, skills, and competencies developed through training align with the actual needs of communities during disasters.

This issue is particularly relevant in disaster-prone regions such as Kerala, where recurring floods, landslides, coastal hazards, and extreme weather events have highlighted the importance of local preparedness and volunteer engagement. The increasing dependence on youth volunteers during emergencies raises important questions regarding the readiness of NCC cadets to contribute effectively to disaster preparedness initiatives and disaster response operations. Understanding their preparedness levels is essential for identifying strengths, addressing limitations, and improving training programmes.

Therefore, there is a need to systematically assess the preparedness of NCC cadets in disaster management. The present study seeks to examine the knowledge, attitudes, and skills of NCC cadets related to disaster preparedness, understand the influence of NCC training on disaster risk reduction competencies, explore the roles performed by cadets during disaster events, and identify gaps between existing NCC training and community

disaster management needs. The findings of the study are expected to contribute to strengthening youth participation in disaster management and enhancing the effectiveness of NCC as a resource for disaster preparedness and community resilience.

1.3 BACKGROUND OF THE STUDY

Disasters have been a recurring phenomenon throughout human history, affecting societies, economies, and environments across the world. However, the frequency, intensity, and complexity of disasters have increased significantly in recent decades. Climate change, environmental degradation, rapid urbanization, population growth, and unsustainable development practices have contributed to the growing occurrence of disasters worldwide. According to the United Nations Office for Disaster Risk Reduction (UNDRR, 2015), disasters result in substantial human, economic, social, and environmental losses, disproportionately affecting vulnerable populations and developing countries. The increasing disaster burden has prompted governments, international organizations, and communities to adopt proactive approaches aimed at reducing disaster risks and enhancing resilience.

The global disaster management paradigm has gradually evolved from a reactive focus on emergency response and relief to a more comprehensive approach emphasizing disaster risk reduction, preparedness, mitigation, and resilience building. This shift is reflected in international frameworks such as the Sendai Framework for Disaster Risk Reduction 2015–2030, which highlights the importance of understanding disaster risks, strengthening disaster governance, investing in resilience, and enhancing preparedness for effective response and recovery (UNDRR, 2015). Preparedness has emerged as a central component of disaster management because it enables individuals, communities, and institutions to anticipate hazards, respond effectively during emergencies, and recover more efficiently after disasters.

India is one of the most disaster-prone countries in the world due to its diverse geographical and climatic conditions. The country is vulnerable to a wide range of natural hazards, including floods, cyclones, droughts, earthquakes, landslides, avalanches, heat waves, and coastal hazards. According to the National Disaster Management Authority (NDMA), approximately 58 percent of India's landmass is vulnerable to earthquakes, over 40 million hectares are prone to floods, and nearly 5,700 kilometres of coastline are exposed to cyclones and tsunamis (NDMA, 2019).

Frequent disaster events have demonstrated the need for effective disaster management systems and strengthened preparedness mechanisms at national, state, and community levels.

Recognizing these challenges, the Government of India enacted the Disaster Management Act, 2005, which established a comprehensive institutional framework for disaster management. The Act led to the formation of the National Disaster Management Authority (NDMA), State Disaster Management Authorities (SDMAs), District Disaster Management Authorities (DDMAs), and the National Institute of Disaster Management (NIDM). These institutions have played a crucial role in promoting disaster preparedness, capacity building, awareness generation, and community participation in disaster risk reduction activities (Government of India, 2005). Over the years, India's disaster management approach has increasingly emphasized preparedness and resilience rather than relying solely on post-disaster relief measures.

Among Indian states, Kerala presents a particularly significant context for disaster management research. Despite its high human development indicators and relatively strong social infrastructure, Kerala is highly vulnerable to multiple hazards, including floods, landslides, coastal erosion, storm surges, lightning, and extreme rainfall events. The devastating floods and landslides of 2018, followed by subsequent flood events in 2019 and 2021, exposed the state's vulnerability to climate-induced disasters and highlighted the importance of community preparedness and local response capacities (Kerala State Disaster Management Authority [KSDMA], 2019). These disasters caused extensive damage to lives, livelihoods, infrastructure, and ecosystems, emphasizing the need for strengthening disaster preparedness at all levels of society.

The experiences of Kerala have demonstrated that disaster management cannot be achieved solely through government intervention. Community participation has emerged as a critical element of effective disaster risk reduction and emergency response. Community-based disaster management approaches recognize local communities as active stakeholders in preparedness, response, recovery, and resilience-building efforts. Volunteers, local organizations, and community groups often serve as first responders during disasters, particularly in situations where formal emergency services are overwhelmed or delayed. Consequently, strengthening community

capacities and promoting volunteer engagement have become important priorities in disaster management policies and programmes (IFRC, 2020).

Within this context, youth participation has gained increasing recognition in disaster management initiatives worldwide. Young people possess the energy, adaptability, creativity, and leadership potential required to contribute effectively to preparedness and response activities. International frameworks such as the Sendai Framework recognize youth as important stakeholders in disaster risk reduction and encourage their active involvement in building resilient communities (UNDRR, 2015). Research suggests that youth can contribute to disaster awareness programmes, preparedness campaigns, risk communication, community mobilization, and emergency response activities (Pfefferbaum et al., 2018). As a result, youth organizations have become important platforms for promoting disaster preparedness and community resilience.

In India, one of the most prominent youth organizations involved in nation-building and community service is the National Cadet Corps (NCC). Established under the National Cadet Corps Act of 1948, NCC functions under the Ministry of Defence and aims to develop character, discipline, leadership, secular outlook, spirit of adventure, and ideals of selfless service among young citizens. With its extensive network of schools, colleges, and training institutions, NCC represents one of the largest uniformed youth organizations in the world

.(Directorate General NCC, 2024). The organization provides structured training through its Army, Naval, and Air Wings and seeks to prepare youth for responsible citizenship and national service.

Although originally established with a focus on youth development and national integration, NCC has increasingly expanded its role in social service and community engagement activities. Cadets regularly participate in environmental conservation programmes, blood donation campaigns, health awareness initiatives, literacy drives, road safety campaigns, and disaster management activities. Through these programmes, NCC seeks to foster civic responsibility and encourage active participation in community development.

The growing significance of disasters in India has led to the integration of disaster management components within NCC training programmes. Cadets receive exposure to disaster awareness, first aid, leadership development, rescue techniques, emergency

preparedness, and community service activities. NCC camps, institutional training sessions, and social service programmes provide opportunities for cadets to develop competencies that may be useful during emergencies. These training experiences are intended to prepare cadets to support civil authorities and communities during disaster situations (Directorate General NCC, 2024).

The relevance of NCC to disaster management became particularly evident during recent disaster events. NCC cadets have participated in flood relief operations, cyclone response activities, rehabilitation programmes, awareness campaigns, and public service initiatives across various parts of India. During the Kerala floods of 2018, NCC cadets contributed to relief distribution, cleaning operations, awareness activities, and rehabilitation efforts in affected communities (KSDMA, 2019). Similarly, NCC cadets were involved in supporting public awareness campaigns and community outreach initiatives during the COVID-19 pandemic. These experiences have reinforced the perception of NCC as an important volunteer resource in disaster management.

Despite the growing involvement of NCC cadets in disaster-related activities, limited research has been conducted to assess their preparedness for disaster management responsibilities. Existing studies and reports primarily focus on the participation of NCC cadets in disaster response and community service activities rather than evaluating their preparedness levels. Preparedness encompasses multiple dimensions, including disaster-related knowledge, attitudes, practical skills, and the ability to apply these competencies in real-world situations. Understanding these dimensions is important because effective participation in disaster management requires more than willingness to serve; it requires adequate preparedness to respond appropriately and safely during emergencies.

Furthermore, the increasing complexity of disasters and the evolving expectations placed on youth volunteers raise important questions regarding the adequacy of existing training programmes. While NCC training includes disaster-related components, it remains unclear whether current training sufficiently equips cadets to meet community disaster management needs. There is also limited evidence regarding the extent to which NCC training influences preparedness outcomes and contributes to disaster risk reduction capacities among cadets.

Against this backdrop, the present study seeks to examine the preparedness of NCC cadets in disaster management. By focusing on disaster-related knowledge, attitudes, skills, training experiences, and perceived preparedness, the study aims to contribute to a better understanding of the role of NCC in disaster risk reduction. The findings are expected to provide valuable insights for strengthening disaster preparedness training, enhancing youth participation in disaster management, and supporting the development of more resilient communities.

1.4 RELEVANCE AND SIGNIFICANCE OF THE STUDY

Disasters continue to pose significant challenges to societies worldwide, affecting human lives, livelihoods, infrastructure, and sustainable development. The increasing frequency and intensity of disasters, particularly those associated with climate change and environmental degradation, have highlighted the importance of strengthening disaster preparedness and resilience at individual, community, and institutional levels. In this context, the participation of trained volunteers and youth organizations has become an essential component of disaster risk reduction and disaster management initiatives. The present study on the preparedness of NCC cadets in disaster management is therefore both timely and relevant, given the growing role of youth in disaster preparedness and response activities.

The relevance of this study lies in its focus on disaster preparedness, which is widely recognized as one of the most important phases of disaster management. Preparedness enables individuals and communities to anticipate, respond to, and recover from disasters more effectively. As disasters increasingly require community-based approaches and local participation, understanding the preparedness of youth volunteers becomes essential. NCC cadets constitute a significant segment of organized youth who are frequently involved in community service, disaster awareness campaigns, relief activities, and emergency support operations. Assessing their preparedness can provide valuable insights into their capacity to contribute to disaster risk reduction efforts.

From an academic perspective, the study contributes to the existing body of knowledge on disaster management, youth participation, and disaster preparedness. While several studies have examined community resilience, volunteer engagement, and disaster response, relatively limited research has focused specifically on the preparedness of NCC cadets. Existing literature largely documents the participation of NCC cadets in

disaster-related activities rather than systematically evaluating their knowledge, attitudes, skills, and preparedness levels. By examining these dimensions, the present study seeks to address an important gap in the literature and contribute empirical evidence to the fields of disaster management, youth development, and community resilience.

The study is also significant from a policy and programme development perspective. National and international disaster management frameworks increasingly emphasize the role of youth in disaster risk reduction and preparedness initiatives. Findings from the study may help policymakers, disaster management authorities, and educational institutions better understand the strengths and limitations of existing preparedness mechanisms among NCC cadets. Such insights may support the development of policies and programmes aimed at strengthening youth participation in disaster management and enhancing community resilience.

For the National Cadet Corps, the study provides an opportunity to evaluate the effectiveness of disaster-related training components within the NCC programme. NCC has increasingly been involved in disaster preparedness and response activities across the country, and expectations regarding the role of cadets during emergencies continue to grow. Understanding the preparedness levels of cadets can help identify areas where training is effective and areas where additional capacity building may be required. The findings may contribute to improving training curricula, practical exercises, disaster management modules, and community engagement initiatives within NCC.

The study is equally significant for disaster management agencies such as the National Disaster Management Authority (NDMA), State Disaster Management Authorities (SDMAs), District Disaster Management Authorities (DDMAs), and other organizations involved in disaster preparedness and response. These institutions often rely on community volunteers and youth organizations to support preparedness and response efforts. Information regarding the preparedness of NCC cadets may assist these agencies in designing training programmes, volunteer mobilization strategies, and collaborative initiatives that enhance disaster management capacities at the local level.

The significance of the study is particularly evident in the context of Kerala, a state that has experienced recurrent floods, landslides, coastal hazards, and extreme weather events in recent years. The experiences of the 2018 floods and subsequent disasters

have demonstrated the importance of local preparedness, volunteer engagement, and coordinated community response. Understanding the preparedness of NCC cadets in such a disaster-prone environment can provide valuable insights into the role that organized youth volunteers can play in strengthening disaster resilience and supporting community-based disaster management initiatives.

Furthermore, the study has practical significance for communities. Prepared and well-trained volunteers can contribute to awareness generation, risk communication, preparedness planning, emergency response, and recovery activities. By identifying strengths and gaps in the preparedness of NCC cadets, the study may contribute to improving the quality and effectiveness of volunteer participation in disaster management. Enhanced preparedness among cadets can ultimately support safer and more resilient communities.

Finally, the study aligns with the broader goals of disaster risk reduction and sustainable development. Strengthening the preparedness of youth volunteers contributes not only to effective disaster management but also to the development of responsible, capable, and community-oriented citizens. By examining the preparedness of NCC cadets and identifying opportunities for improvement, the study seeks to support efforts aimed at building resilient communities and fostering a culture of disaster preparedness among future generations.

Thus, the present study is academically relevant, socially significant, and practically important. It contributes to understanding the preparedness of NCC cadets in disaster management while generating knowledge that may be useful for educational institutions, disaster management authorities, policymakers, NCC organizations, and communities seeking to enhance disaster resilience and preparedness capacities.

1.5 CHAPTERISATION

The dissertation is organized into five chapters, each dealing with a specific aspect of the research. The details of each chapter are as follows:

Chapter I: Introduction

This chapter provides an overview of the study by introducing the research topic, "Preparedness of NCC Cadets in Disaster Management." It includes the introduction to

the study, background of the study, statement of the problem, relevance and significance of the study, and the chapterisation of the study.

Chapter II: Literature Review

This chapter presents a comprehensive review of the existing literature related to disaster management, disaster preparedness, youth participation in disaster management, the National Cadet Corps, disaster management skills, the influence of NCC training, the roles of NCC cadets during disaster events, and the gaps between NCC training and community disaster management needs. The literature is organized thematically to identify existing knowledge, research gaps, and the theoretical foundation for the present study.

Chapter III: Methodology

This chapter describes the research methodology adopted for the study. It includes the title of the study, objectives, definition of concepts, pilot study, research design, universe and unit of study, sampling design, data collection methods, pre-test, data analysis procedures using IBM SPSS Statistics Version 22, ethical considerations, and the assumptions, limitations, and scope of the study.

Chapter IV: Data Analysis and Interpretation

This chapter presents the analysis and interpretation of the data collected from the respondents. It includes the demographic profile of the respondents and objective-wise analysis of the study variables using descriptive statistical techniques such as frequencies, percentages, pie charts, and cross-tabulations. The findings are interpreted in relation to the research objectives.

Chapter V: Findings, Suggestions and Conclusion

This chapter summarizes the major findings of the study based on the data analysis. The findings are discussed in relation to the research objectives and supported by relevant literature. The chapter also presents practical suggestions for strengthening disaster preparedness among NCC cadets and concludes the study by highlighting its major implications, contributions, and recommendations for future research.

CHAPTER II

REVIEW OF LITERATURE

2.1. INTRODUCTION

Literature Review is the introduction to the literature. Literature review is a systematic and critical evaluation of the previous scholarly articles, research studies, policy documents, reports and theoretical contributions on a specific research topic. It provides researchers with an idea about the current state of knowledge, key concepts and theories that are established, review of previous findings, and gaps that need to be investigated. In Snyder's (2019) words, a literature review is a document that offers an overall summary of the current knowledge and will act as a basis for creating questions for research and methodology. Likewise, Creswell and Creswell (2018) argue that literature review will help the researchers to situate their study within the overall field of study and explain the importance of the study.

Literature reviews in the field of disaster management are very important to comprehend the role of various stakeholders in disaster risk reduction, recovery, response and preparation. Some previous research has highlighted the importance of community participation, volunteering, youth involvement and capacity building in the context of disaster resilience (UNDRR, 2015). Today, due to the increasing frequency of disasters all over the world, youth organizations have been acknowledged as important actors in disaster risk reduction and disaster response activities. In the present study, the emphasis is mainly given to the preparedness of cadets from the NCC in the field of disaster management. Preparedness is regarded as the capabilities of the people to get ready for a disaster situation, to respond to a disaster event, and to recover after a disaster incident (UNDRR, 2015). The National Cadet Corps (NCC) happens to be the second biggest uniformed youth wing in India, which has been engaged in different kinds of preparedness activities. Although the cadets of NCC are well known for their involvement in disaster related activities there is limited empirical evidence on the level of their disaster’s preparedness and the effectiveness of NCC training in developing them for Disaster Risk Reduction.

Thus, the literature review becomes necessary to gain insight into the current knowledge on disaster management, youth participation, NCC training, disaster preparedness, disaster response and challenges faced by volunteer participation in disasters. The review also aids in determining the gaps in research that support the

current study and establishes the theoretical and conceptual context needed to discuss the preparedness of NCC cadets.

For this reason, the literature review has been divided into nine thematic sections. Theme one was all about disaster management and youth participation and it encompassed issues such as disaster risk reduction, disaster community resilience and youth volunteerism. Theme two was concerned with youth participation in disaster management, where youth were identified as agents of preparedness and community resilience.

The third theme is about National Cadet Corps and Disaster Management which covers the aims, organization and disaster related activities of NCC.

The fourth theme explores disaster management related literature known to NCC cadets, and the fifth theme focuses on NCC cadets' roles in disaster response and relief operations. The 6th theme is on the NCC cadets Disaster Management Skills such as: Search and Rescue Skills, Communication Skills, Leadership Skills, Team Work Skills, First Aid Skills. The 7th theme is on the impact of NCC training on disaster preparedness and the impact of training programmes. The eighth theme reviews evidence on how the NCC cadets have been involved in various recent disaster events, such as floods, cyclones, landslides and community outreach. Lastly, the ninth theme looks critically at the dichotomy between the training offered by the NCC and the disaster management requirement in the community, focusing on training constraints, community expectations, and preparedness issues.

The literature review attempts to give an overall picture of the preparedness of NCC cadets in disaster management, through these thematic discussions, and lays the groundwork for the present review. Finally, the chapter identifies research gaps that require further studies on NCC cadets' preparedness and ability to effectively participate in DRR and community resilience.

2.2 REVIEW OF LITERATURE

2.2.1. Disaster Management and Youth Participation

2.2.1.1. Concept and Phases of Disaster Management

Disaster management refers to the systematic process of planning, organizing, coordinating, and implementing measures to reduce the impact of disasters and facilitate recovery. According to the United Nations Office for Disaster Risk Reduction (UNDRR), disaster management encompasses activities aimed at preventing, mitigating, preparing for, responding to, and recovering from disasters (UNDRR, 2025). The contemporary approach has shifted from a reactive disaster-response model to a proactive risk-reduction model that focuses on vulnerability reduction and resilience building (UNDRR, 2015).

The disaster management cycle is commonly divided into four phases: mitigation, preparedness, response, and recovery. Mitigation involves actions taken to reduce hazard impacts before disasters occur, while preparedness focuses on planning, training, awareness creation, and capacity building. Response includes immediate actions during and immediately after a disaster to save lives and reduce suffering. Recovery involves rehabilitation, reconstruction, and restoring normal community functioning (UNDRR, 2015; NIDM, 2021).

Research increasingly highlights that effective disaster management requires participation from multiple stakeholders, including government agencies, civil society organizations, local communities, and volunteers. Community participation is considered a critical component because local populations are often the first responders during emergencies and possess valuable contextual knowledge regarding local vulnerabilities and capacities (UNDRR, 2023).

2.2.1.2 Disaster Risk Reduction (DRR) and Community Resilience

Disaster Risk Reduction (DRR) refers to the systematic effort to analyse and reduce the causal factors of disasters. DRR focuses on minimizing vulnerabilities, reducing hazard exposure, improving preparedness, and enhancing the ability of communities to withstand and recover from disasters (UNDRR, 2015).

Community resilience is closely linked to DRR and refers to the capacity of communities to anticipate, prepare for, respond to, and recover from disasters while maintaining essential functions. Recent DRR approaches recognize resilience as a social process that depends on community participation, local knowledge, social networks, and collective action (UNDRR, 2023).

International literature suggests that resilient communities are characterized by strong social capital, active civic participation, effective communication systems, and local leadership. Community-based disaster risk reduction initiatives have been found to improve preparedness and strengthen adaptive capacities in hazard-prone regions (G20 DRR Working Group, 2024).

The 2018 Kerala floods demonstrated the importance of community resilience in disaster response. Reports indicate that local residents, fishermen, volunteers, and community groups played a significant role in rescue and relief operations. The disaster highlighted how community participation complemented formal government response mechanisms and contributed to faster recovery efforts (Kerala State Disaster Management Authority [KSDMA], 2019; NIDM, 2021).

Studies examining the Kerala floods further emphasize that social solidarity, volunteer mobilization, and community networks were crucial in supporting affected populations. Community-driven approaches during the floods strengthened local resilience and demonstrated the value of citizen engagement in disaster management (Thomas, 2023).

2.2.1.3 Role of Youth Volunteers in Disaster Preparedness

Youth are increasingly recognized as important stakeholders in disaster risk reduction. The Sendai Framework specifically acknowledges children and youth as agents of change who can contribute to preparedness, awareness creation, risk communication, and community resilience (UNDRR, 2015).

Youth volunteers contribute to disaster preparedness through awareness campaigns, community education, first aid training, evacuation support, and emergency communication activities. Their energy, adaptability, technological skills, and community engagement make them valuable resources during both preparedness and response phases (UNDRR, 2020).

Research indicates that involving youth in preparedness activities increases community awareness levels and strengthens local disaster readiness. Young volunteers often act as intermediaries between disaster management agencies and communities, helping disseminate information and mobilize local participation (Mitchell et al., 2020).

In India, youth organizations such as NCC, NSS, Bharat Scouts and Guides, and Nehru Yuva Kendra Sangathan have participated in disaster awareness programmes, relief

operations, and community preparedness initiatives. Government policies increasingly recognize youth participation as an essential component of community-based disaster management (NIDM, 2021).

2.2.1.4 Youth Organizations in Disaster Response

Youth organizations play a critical role in strengthening disaster response capacity by providing trained volunteers who can assist in rescue, relief distribution, shelter management, and public awareness activities. International experiences demonstrate that organized youth groups contribute significantly to emergency response when adequately trained and coordinated with disaster management agencies (UNDRR, 2020).

The effectiveness of youth organizations depends largely on training, preparedness, leadership development, and coordination mechanisms. Studies have shown that trained youth volunteers can support emergency services by performing non-specialized but essential functions, thereby reducing the burden on professional responders (UNDRR, 2025).

During the 2018 Kerala floods, organized volunteer groups and digitally connected youth networks played a crucial role in rescue coordination, information dissemination, and relief distribution. Social media-based volunteer networks facilitated communication between affected populations and rescue agencies, demonstrating the growing importance of youth-led initiatives in disaster response (Rajan & Aji, 2020).

The Kerala experience highlights the need for structured training and institutional support for youth volunteers. Lessons learned from the floods indicate that integrating trained youth organizations into disaster management frameworks can strengthen preparedness, improve response efficiency, and enhance community resilience (KSDMA, 2019).

2.2.2. Youth Participation in Disaster Management

2.2.2.1 Youth as Agents of Disaster Preparedness

The role of youth in disaster management has evolved significantly over the last two decades. Earlier approaches viewed young people primarily as vulnerable populations

requiring protection during disasters. Contemporary disaster risk reduction (DRR) frameworks, however, recognize youth as active contributors to preparedness, resilience building, and community mobilization. The Sendai Framework for Disaster Risk Reduction 2015–2030 explicitly emphasizes the "full, equal, meaningful and inclusive participation" of youth in disaster risk reduction initiatives (UNDRR, 2015).

Research suggests that young people possess unique capacities that make them valuable actors in disaster preparedness. Their ability to learn quickly, adapt to changing environments, communicate through digital platforms, and influence peers enables them to participate effectively in risk awareness campaigns, preparedness training, and community education programmes (Cumiskey et al., 2015).

Pfefferbaum et al. (2018) argued that involving youth in disaster preparedness enhances not only community readiness but also young people's self-efficacy, leadership skills, and disaster awareness. Their review found that youth participation contributes to increased preparedness behaviours among families and communities while simultaneously promoting personal development among participants.

Recent studies have further emphasized that youth engagement in DRR should move beyond tokenistic participation and include youth in planning, decision-making, and implementation processes. Pickering et al. (2022) found that young people perceive themselves as capable contributors to climate resilience and disaster preparedness initiatives when provided with meaningful opportunities and institutional support.

In India, youth engagement in disaster preparedness is promoted through educational institutions and volunteer organizations such as NCC, NSS, Nehru Yuva Kendra Sangathan (NYKS), and Bharat Scouts and Guides. The National Institute of Disaster Management recognizes youth participation as a critical component of community-based disaster preparedness and resilience-building strategies (NIDM, 2021).

2.2.2.2 Volunteerism and Community Resilience

Volunteerism is increasingly recognized as an important component of disaster resilience. Community resilience refers to the ability of communities to anticipate, withstand, adapt to, and recover from disaster impacts. Volunteer participation strengthens social networks, enhances collective action, and increases local response capacity during emergencies (UNDRR, 2025).

Studies indicate that volunteer engagement contributes significantly to disaster preparedness because volunteers often serve as links between formal disaster management institutions and local communities. Through awareness programmes, evacuation assistance, first aid activities, and relief support, volunteers enhance community readiness and reduce disaster vulnerabilities (Gujarat Institute of Disaster Management, 2019).

Ridzuan and Rahman (2025) found that youth volunteers provide critical manpower during disaster response and recovery operations. Their study demonstrated that volunteer participation positively influences community recovery and strengthens social solidarity during flood disasters.

The literature also highlights that volunteerism promotes social capital, which is a key element of community resilience. Communities with strong volunteer networks often recover faster after disasters because they possess stronger interpersonal relationships, trust, and collective capacities for action (Ganji et al., 2019).

The 2018 Kerala floods demonstrated the importance of volunteerism in disaster management. Thousands of young volunteers participated in rescue operations, relief distribution, data management, shelter support, and digital coordination activities. Community-based volunteer efforts complemented government-led disaster response and significantly contributed to rescue and recovery operations. Studies examining the Kerala floods identified volunteer mobilization as one of the key factors supporting community resilience and post-disaster recovery (Thomas, 2023).

2.2.2.3 Role of Youth Organizations in Emergency Response

Youth organizations provide structured platforms through which young people can contribute to disaster management activities. Such organizations facilitate training, leadership development, teamwork, and coordinated emergency response.

According to UNDRR (2020), youth organizations contribute to emergency response by mobilizing volunteers, supporting awareness campaigns, disseminating information, assisting in evacuation procedures, and providing logistical support during disasters.

The Sendai Framework recognizes organized youth groups as important stakeholders in reducing disaster risk and strengthening resilience at local, national, and global levels. Youth organizations help translate disaster management policies into

community-level action by engaging local populations and encouraging participation in preparedness activities.

Cumiskey et al. (2015) observed that youth organizations create opportunities for leadership development and facilitate knowledge sharing among young people, enabling them to participate meaningfully in disaster risk governance.

In India, organizations such as NCC, NSS, NYKS, and Bharat Scouts and Guides have participated in disaster preparedness programmes, awareness campaigns, rescue support activities, and relief operations. These organizations often function as auxiliary support systems for government agencies during emergencies and contribute significantly to community-level disaster preparedness initiatives.

During the Kerala floods, youth groups, student organizations, and volunteer networks collaborated with local governments, district administrations, and disaster management authorities. Their involvement in information management, rescue coordination, relief distribution, and rehabilitation activities demonstrated the potential of organized youth participation in disaster response.

2.2.2.4 Capacity Building Among Young Volunteers

Capacity building refers to the process of developing knowledge, skills, attitudes, and competencies necessary for effective participation in disaster management. Research consistently highlights that youth participation becomes more effective when supported by systematic training and capacity-building programmes.

The Sendai Framework encourages governments and institutions to strengthen youth capacities through education, awareness programmes, disaster drills, and preparedness training initiatives (UNDRR, 2015).

Studies suggest that disaster education improves risk awareness, preparedness behaviours, and emergency response competencies among young people. Participation in drills, simulations, and community-based preparedness programmes enhances confidence and readiness to respond during disasters (Pfefferbaum et al., 2018).

The UNDRR Words into Action guidelines emphasize that meaningful youth participation requires continuous investment in training, leadership development, and institutional support mechanisms. Youth who receive structured disaster management

training demonstrate higher preparedness levels and greater willingness to participate in community resilience activities.

In the Indian context, capacity-building initiatives are often implemented through NCC camps, NSS programmes, disaster management clubs, school safety programmes, and community awareness activities. These interventions aim to equip young volunteers with first aid skills, search and rescue knowledge, leadership abilities, and emergency response competencies.

2.2.2.5 Digital Engagement and Youth-Led Innovation in Disaster Management

A growing body of literature highlights the role of youth in utilizing technology for disaster preparedness and response. Young people frequently use social media, mobile applications, geospatial technologies, and digital communication platforms to disseminate information, coordinate relief efforts, and support emergency response activities.

Recent studies indicate that digitally connected youth contribute to disaster preparedness by sharing early warnings, conducting awareness campaigns, supporting data collection, and facilitating communication between affected communities and response agencies (CEEW, 2024).

The Kerala flood response demonstrated the effectiveness of youth-led digital volunteerism, where social media platforms and online networks were used extensively to coordinate rescue operations and relief activities. These experiences illustrate the growing significance of technological competencies among youth in modern disaster management.

2.2.3. National Cadet Corps and Disaster Management

2.2.3.1. Objectives and Structure of the National Cadet Corps

The National Cadet Corps (NCC) is the largest uniformed youth organization in India and functions under the Ministry of Defence, Government of India. Established through the National Cadet Corps Act of 1948, NCC aims to develop character, discipline, leadership, secular outlook, spirit of adventure, and ideals of selfless service among young citizens (Directorate General NCC, 2024). The organization seeks to create a

pool of organized, trained, and motivated youth capable of contributing to national development and national security.

The NCC is organized into Army, Naval, and Air Wings and operates through Junior Division/Junior Wing (school level) and Senior Division/Senior Wing (college level). The organizational structure extends from the Directorate General at the national level to state directorates, group headquarters, battalions, and educational institutions. This decentralized structure enables NCC to mobilize large numbers of trained cadets for community service and emergency response activities across the country (Directorate General NCC, 2024).

Scholars have noted that the organizational design of NCC provides an institutional mechanism for youth engagement in public service and disaster management. Through structured training programmes, camps, and community activities, cadets develop competencies that are relevant to disaster preparedness, including leadership, teamwork, communication, and basic emergency response skills (NIDM, 2019).

Kerala has one of the strongest NCC networks in India, with active participation from schools and colleges. NCC directorates in Kerala regularly organize training programmes related to disaster management, environmental conservation, community service, and emergency preparedness. These initiatives have gained increased importance following recurrent flood events and climate-related disasters in the state (Kerala Directorate NCC, 2023).

2.2.3.2. NCC's Social Service and Nation-Building Role

Social service is one of the core components of NCC training. The organization aims to develop socially responsible citizens capable of contributing to community welfare and national development. NCC activities include literacy campaigns, environmental protection programmes, blood donation drives, health awareness campaigns, Swachh Bharat initiatives, road safety campaigns, and disaster relief activities (Directorate General NCC, 2024).

Research indicates that participation in NCC contributes to civic engagement, leadership development, and community-oriented attitudes among youth. Singh and Sharma (2021) found that NCC training enhances social responsibility and encourages active citizenship through participation in community service programmes. These

experiences help cadets develop a sense of duty toward society and strengthen their commitment to public welfare.

The nation-building role of NCC extends beyond military-oriented training. The organization promotes national integration by bringing together youth from diverse social, cultural, linguistic, and regional backgrounds. Camps such as the Republic Day Camp, National Integration Camp, and Youth Exchange Programme are designed to foster unity, cultural understanding, and national consciousness among cadets (Directorate General NCC, 2024).

From a disaster management perspective, nation-building involves strengthening social cohesion, community participation, and volunteerism. These attributes are essential for building resilient communities capable of responding effectively to disasters. Consequently, NCC's social service programmes indirectly contribute to disaster risk reduction by promoting civic responsibility and community engagement (NIDM, 2019).

2.2.3.3. NCC Disaster Management Initiatives

Over the past two decades, disaster management has become an increasingly important component of NCC activities. The Government of India has recognized the potential of NCC cadets to support disaster preparedness and response efforts due to their organizational discipline, training, and widespread presence across the country.

NCC training programmes include modules on disaster management, first aid, rescue techniques, evacuation procedures, fire safety, and community preparedness. Disaster management training is often delivered through institutional programmes, camps, awareness campaigns, and practical exercises designed to familiarize cadets with emergency situations (Directorate General NCC, 2024).

According to the National Institute of Disaster Management (2019), youth organizations such as NCC play an important role in community-based disaster risk reduction by supporting awareness generation, preparedness training, and volunteer mobilization. NCC cadets frequently participate in mock drills, disaster awareness programmes, and emergency preparedness campaigns conducted in collaboration with district administrations and disaster management authorities.

Recent policy discussions have emphasized integrating youth organizations into disaster risk reduction frameworks. NCC is increasingly viewed as a strategic resource for strengthening local preparedness capacities because cadets can assist in disseminating risk information, conducting community awareness programmes, and supporting emergency response efforts (NDMA, 2020).

Following the 2018 Kerala floods, greater emphasis was placed on disaster preparedness training for youth organizations, including NCC. Cadets participated in relief distribution, awareness campaigns, rehabilitation activities, and community outreach programmes in affected districts. Experiences from Kerala demonstrated the value of trained youth volunteers in supplementing formal disaster response systems and highlighted the importance of expanding disaster management training within NCC programmes (KSDMA, 2019).

2.2.3.4. Government Expectations from NCC During Disasters

The Government of India considers NCC a valuable auxiliary force during emergencies and disasters. Although NCC cadets are not professional disaster responders, they are expected to provide organized volunteer support in areas such as relief distribution, shelter management, awareness generation, crowd management, communication support, and community mobilization (NDMA, 2020).

The Disaster Management Act of 2005 emphasizes the importance of community participation and volunteer involvement in disaster management. Within this framework, youth organizations such as NCC are viewed as important stakeholders capable of enhancing preparedness and supporting response efforts at the local level (Government of India, 2005).

Government agencies increasingly expect NCC cadets to contribute to disaster risk reduction rather than merely participating in post-disaster relief activities. This shift reflects the broader transition from reactive disaster response to proactive preparedness and resilience-building approaches promoted under the Sendai Framework for Disaster Risk Reduction 2015–2030 (UNDRR, 2015).

Studies suggest that governments value NCC because of its extensive geographic reach, disciplined organizational structure, and ability to mobilize large numbers of trained youth within short periods. These characteristics make NCC an important resource for

awareness campaigns, disaster drills, preparedness initiatives, and emergency support operations (NIDM, 2019).

The recurrent occurrence of floods, landslides, and extreme weather events in Kerala has increased expectations regarding youth participation in disaster preparedness. Kerala State Disaster Management Authority has consistently emphasized community-based disaster management and volunteer engagement. Within this context, NCC cadets are increasingly viewed as potential contributors to preparedness activities, community awareness programmes, and local disaster response efforts (KSDMA, 2019).

2.2.3.5. NCC as a Bridge Between Youth Development and Disaster Resilience

Recent literature increasingly views NCC not only as a youth development organization but also as a platform for strengthening disaster resilience. The competencies developed through NCC training-discipline, leadership, teamwork, communication, physical fitness, and civic responsibility-align closely with the skills required for disaster preparedness and response.

Research on youth engagement in disaster management suggests that structured organizations provide more effective opportunities for preparedness training than informal volunteer groups because they offer systematic instruction, supervision, and operational coordination (UNDRR, 2020). NCC's institutional framework therefore positions it as an important mechanism for integrating youth participation into disaster risk reduction strategies.

However, scholars also note that the effectiveness of NCC's contribution to disaster management depends on the adequacy of training, practical exposure, coordination with disaster management agencies, and alignment between training curricula and emerging disaster risks. These concerns provide an important foundation for examining the preparedness of NCC cadets and identifying potential gaps between training and community disaster management needs.

2.2.4. Knowledge of NCC Cadets Regarding Disaster Management

2.2.4.1. Knowledge as a Component of Disaster Preparedness

Knowledge is widely recognized as one of the fundamental dimensions of disaster preparedness. Disaster preparedness knowledge refers to an individual's understanding of hazards, risks, preparedness measures, warning systems, emergency procedures, and response mechanisms. Research indicates that individuals with higher levels of disaster-related knowledge are more likely to engage in preparedness activities and adopt risk-reduction behaviours (UNDRR, 2015).

The Sendai Framework for Disaster Risk Reduction identifies "understanding disaster risk" as the first priority for action and emphasizes the importance of disaster education and awareness programmes in strengthening preparedness capacities (UNDRR, 2015). Similarly, the National Disaster Management Authority (NDMA) highlights disaster awareness and knowledge dissemination as critical elements of community-based disaster management (NDMA, 2019).

Several studies have demonstrated a positive relationship between disaster knowledge and preparedness behaviour. Individuals who possess greater knowledge about hazards and emergency response procedures tend to exhibit higher preparedness levels and better decision-making abilities during emergencies (Paton, 2003).

2.2.4.2. Awareness of Disaster Risks

Awareness of disaster risks refers to the ability to recognize hazards, understand their potential impacts, and identify vulnerabilities within communities. Risk awareness is considered the foundation of disaster preparedness because individuals cannot effectively prepare for hazards they do not understand.

International studies have found that disaster education significantly improves hazard awareness among young people. Ronan and Johnston (2005) reported that disaster education programmes increased students' understanding of hazards and encouraged preparedness actions within households and communities. Similarly, Tanner et al. (2009) found that informed youth can serve as important agents of risk communication within their families and neighbourhoods.

Research conducted among university students in disaster-prone regions has revealed varying levels of disaster awareness. Al-Rahmi et al. (2022) observed that students generally possess basic awareness regarding disasters but often lack detailed knowledge

about local risks and preparedness measures. These findings suggest the need for structured educational interventions to strengthen disaster awareness among youth.

In India, studies conducted by NIDM indicate that awareness regarding disaster risks has improved following the implementation of disaster management education programmes in schools and colleges. However, significant variations continue to exist across regions and educational institutions (NIDM, 2021).

Kerala's repeated experiences with floods, landslides, and extreme weather events have increased public awareness regarding disaster risks. Following the 2018 floods, disaster awareness programmes were expanded through schools, colleges, local self-governments, and volunteer organizations. Studies suggest that youth in Kerala demonstrate relatively higher awareness regarding flood-related risks compared to populations in less disaster-prone regions (Thomas et al., 2023).

2.2.4.3 Knowledge of Emergency Procedures

Knowledge of emergency procedures includes understanding evacuation methods, emergency communication systems, first aid measures, shelter management, and safety protocols during disasters.

Research consistently demonstrates that familiarity with emergency procedures enhances individual and community preparedness. According to FEMA (2021), knowledge of evacuation routes, emergency contacts, and safety procedures significantly improves disaster response effectiveness and reduces panic during emergencies.

A study conducted by Pfefferbaum et al. (2018) found that young people who participated in disaster preparedness education programmes demonstrated greater knowledge of emergency procedures and reported higher confidence in responding to emergencies. Similarly, Johnson et al. (2014) found that emergency preparedness training improved students' understanding of appropriate actions during disasters.

School and college-based disaster management programmes in India increasingly emphasize emergency procedure training, including first aid, evacuation drills, and fire safety exercises. NIDM (2021) reported that participation in such activities contributes significantly to disaster preparedness among students and volunteers.

Following major flood events, Kerala strengthened emergency preparedness initiatives in educational institutions. Mock drills, first aid training, and disaster preparedness campaigns have been widely implemented to improve knowledge regarding emergency procedures among students and youth volunteers (KSDMA, 2022).

2.2.4.4. Understanding of Disaster Response Protocols

Disaster response protocols refer to the standardized procedures followed during emergencies to ensure coordinated and effective response efforts. These protocols include reporting mechanisms, command structures, communication procedures, search and rescue guidelines, and relief distribution systems.

Understanding response protocols is particularly important for volunteers and youth organizations because improper actions during emergencies may create additional risks. Studies have shown that trained volunteers demonstrate greater adherence to disaster response protocols and perform more effectively during emergencies (UNDRR, 2020).

Research conducted by Kapucu (2008) emphasized that disaster response effectiveness depends largely on knowledge of organizational structures and coordination mechanisms. Volunteers who understand response protocols are better able to collaborate with emergency services and government agencies.

The Incident Response System adopted in many disaster management frameworks requires volunteers to understand their roles, responsibilities, and reporting relationships. Consequently, disaster education programmes increasingly incorporate training on response coordination and protocol compliance (NDMA, 2019).

The coordinated response during the Kerala floods highlighted the importance of understanding disaster response protocols. Studies found that trained volunteers and organized groups were more effective in supporting rescue, relief, and rehabilitation activities because they operated within established coordination frameworks (KSDMA, 2019).

2.2.4.5. Knowledge Acquired Through NCC Training

NCC training provides cadets with exposure to various aspects of disaster management, including first aid, civil defence, rescue operations, community service, and disaster awareness. Disaster management has become an increasingly important component of

NCC training due to the growing frequency of natural disasters and the recognized role of youth volunteers in emergency situations.

According to the Directorate General NCC (2024), disaster management-related topics are integrated into institutional training, camps, and community service activities. Cadets receive instruction on emergency preparedness, disaster response principles, first aid, and public service responsibilities.

Research examining youth organizations suggests that structured training programmes contribute significantly to disaster-related knowledge acquisition. Participation in drills, simulations, and practical exercises improves understanding of hazards, preparedness measures, and emergency procedures (Pfefferbaum et al., 2018).

Although limited empirical research exists specifically on NCC cadets, available studies indicate that NCC participation positively influences awareness, leadership skills, emergency preparedness, and civic responsibility (Singh & Sharma, 2021). These competencies are directly relevant to disaster management preparedness.

In Kerala, NCC units have increasingly participated in disaster awareness campaigns, flood preparedness activities, and community service programmes following the 2018 floods. These initiatives provide opportunities for cadets to acquire practical knowledge regarding local disaster risks and preparedness measures (Kerala Directorate NCC, 2023).

2.2.4.6. Disaster Education and Preparedness Knowledge Among Youth

Recent literature emphasizes the importance of disaster education in developing preparedness knowledge among young people. Disaster education programmes improve understanding of hazards, preparedness measures, emergency procedures, and response responsibilities.

Ronan et al. (2015) found that disaster education interventions significantly improved preparedness knowledge and encouraged positive preparedness behaviours among students. Similarly, Shaw et al. (2011) argued that youth-focused disaster education contributes to long-term community resilience by creating informed and prepared citizens.

The literature suggests that disaster knowledge should not be viewed merely as theoretical information. Effective preparedness requires practical understanding, experiential learning, simulations, drills, and opportunities to apply knowledge in real-world contexts. This observation is particularly relevant for organizations such as NCC, where experiential training forms a core component of learning.

2.2.5. Role of NCC Cadets in Disaster Response and Relief Operations

2.2.5.1. NCC Cadets as Disaster Response Volunteers

The increasing frequency and intensity of disasters have highlighted the importance of volunteer participation in disaster response and relief operations. Youth organizations are increasingly recognized as valuable assets in emergency management because they provide organized manpower, community connections, and rapid mobilization capabilities (UNDRR, 2015). Within India, the National Cadet Corps (NCC) represents one of the largest organized youth volunteer forces and has frequently been involved in disaster response activities across the country.

NCC cadets are not professional emergency responders; however, their training in leadership, discipline, teamwork, first aid, and community service enable them to provide important support during emergencies. The Directorate General NCC emphasizes that cadets are expected to assist civil authorities during natural disasters and other emergencies whenever required (Directorate General NCC, 2024).

Studies on volunteer participation indicate that trained youth volunteers contribute significantly to emergency response by assisting in evacuation, relief distribution, public communication, and community mobilization (UNDRR, 2020). These findings are particularly relevant to NCC cadets because many of the competencies developed through NCC training align with disaster response requirements.

2.2.5.2. Participation in Flood Relief Operations

Floods represent one of the most common natural disasters in India, and NCC cadets have frequently participated in flood relief operations. Their involvement generally includes assisting affected communities, distributing relief materials, supporting

evacuation efforts, managing temporary shelters, and participating in post-disaster rehabilitation activities.

Following the devastating Kerala floods of 2018, NCC cadets from multiple directorates participated in relief and rehabilitation efforts. Cadets assisted local authorities in distributing food, drinking water, clothing, and essential supplies to affected populations. They also participated in cleaning operations, awareness campaigns, and rehabilitation activities in flood-affected areas (KSDMA, 2019).

Similarly, NCC cadets were mobilized during flood emergencies in Assam, Bihar, Uttarakhand, and Maharashtra. Reports from the Ministry of Defence indicate that cadets supported local administrations by helping manage relief camps, assisting vulnerable populations, and facilitating communication between affected communities and authorities (Ministry of Defence, 2021).

Research on flood response highlights that youth volunteers are particularly effective in community-based relief operations because of their familiarity with local conditions and ability to mobilize rapidly (Thomas et al., 2023). These findings support the growing recognition of NCC as a supplementary resource in disaster response systems.

2.2.5.3. Involvement During Cyclones, Landslides, and Other Disasters

In addition to flood response, NCC cadets have participated in relief and preparedness activities associated with cyclones, landslides, earthquakes, and other emergencies. Their contributions vary according to the nature and severity of the disaster and the needs identified by local authorities.

During cyclonic events such as Cyclone Fani (2019), Cyclone Amphan (2020), and Cyclone Yaas (2021), NCC cadets were involved in awareness campaigns, evacuation support, distribution of relief materials, and post-disaster assistance activities (Ministry of Defence, 2021).

Landslides represent a significant hazard in many regions, including Kerala. Following landslide incidents in districts such as Wayanad and Idukki, youth volunteers and NCC cadets participated in relief support, rehabilitation efforts, and community outreach activities. These experiences demonstrated the importance of organized youth participation in supplementing formal disaster response mechanisms (KSDMA, 2022).

The literature suggests that youth volunteers are particularly valuable during localized disasters because they can rapidly mobilize and support affected communities before external assistance arrives (Kapucu, 2008).

2.2.5.4. Community Awareness and Preparedness Activities

Disaster management extends beyond emergency response and includes preparedness and risk reduction activities. NCC cadets regularly participate in community awareness programmes designed to improve disaster preparedness among local populations.

Awareness activities conducted by NCC units include disaster preparedness campaigns, first aid demonstrations, environmental protection initiatives, road safety campaigns, mock drills, and community education programmes. These activities contribute to disaster risk reduction by enhancing public awareness and encouraging preparedness behaviours (Directorate General NCC, 2024).

Research indicates that awareness campaigns conducted by trained youth volunteers can improve preparedness levels and strengthen community resilience. Young volunteers often function as effective communicators because they can engage schools, colleges, families, and community groups in preparedness activities (Pfefferbaum et al., 2018).

Following the 2018 floods, disaster awareness became a major focus within Kerala. NCC units participated in preparedness campaigns, flood awareness programmes, environmental conservation activities, and community outreach initiatives aimed at reducing disaster risks. These programmes contributed to broader efforts to strengthen community resilience across vulnerable regions of the state (KSDMA, 2019).

2.2.5.5. Coordination with Government and Disaster Management Agencies

Effective disaster response requires coordination among multiple stakeholders, including government agencies, disaster management authorities, emergency services, civil society organizations, and volunteers. NCC functions as a structured youth organization capable of supporting coordination efforts during emergencies.

The Disaster Management Act, 2005, emphasizes the importance of community participation and volunteer engagement in disaster management. Within this framework, NCC cadets are often mobilized in coordination with district

administrations, disaster management authorities, police departments, and local governments (Government of India, 2005).

Studies on collaborative emergency management suggest that organized volunteer groups contribute more effectively when integrated into formal response structures and coordination mechanisms (Kapucu, 2008). NCC's hierarchical organizational structure facilitates communication, supervision, and accountability, making it easier to coordinate cadet activities during emergencies.

The response to the 2018 Kerala floods highlighted the importance of coordinated volunteer engagement. NCC cadets, local governments, Kerala State Disaster Management Authority (KSDMA), police departments, and other agencies worked together to support relief and rehabilitation efforts. Such experiences demonstrated the value of integrating youth organizations into disaster management frameworks (KSDMA, 2019).

2.2.5.6. Case Studies of NCC Involvement in Recent Disasters

Kerala Floods (2018)

The Kerala floods represent one of the most significant examples of NCC involvement in disaster response. Cadets participated in relief distribution, rehabilitation activities, awareness campaigns, and community support programmes. Their contributions complemented government efforts and demonstrated the practical application of training received through NCC programmes (KSDMA, 2019).

Cyclone Amphan (2020)

NCC cadets in eastern India supported relief efforts through awareness campaigns, distribution of essential supplies, and assistance to local administrations. These activities highlighted the ability of organized youth volunteers to support emergency response operations during large-scale disasters (Ministry of Defence, 2021).

COVID-19 Pandemic (2020–2022)

Although not a natural disaster, the COVID-19 pandemic represented a major emergency that required extensive volunteer support. NCC cadets across India assisted local administration…ns in awareness campaigns, mask distribution, public health communication, and logistical support activities. More than 50,000 cadets were

reportedly involved in various COVID-19 response initiatives coordinated through state administrations and district authorities (Ministry of Defence, 2021).

These case studies illustrate the diverse roles performed by NCC cadets during emergencies and demonstrate their potential contribution to disaster preparedness and response systems.

2.2.5.7. Challenges in NCC Participation During Disaster Response

Despite their contributions, several challenges affect NCC participation in disaster response activities. These include limitations in advanced technical training, inadequate equipment, safety concerns, legal restrictions, and coordination difficulties during large-scale emergencies.

Research on volunteer disaster response suggests that effective participation requires regular training, practical exercises, institutional support, and clearly defined operational roles (UNDRR, 2020). The literature indicates that while NCC cadets possess significant potential, continuous capacity building is necessary to maximize their effectiveness in disaster management.

These challenges are particularly relevant for the present study because they raise important questions regarding the preparedness of NCC cadets and the extent to which existing training equips them to meet community disaster management needs.

2.2.6. Disaster Management Skills Among NCC Cadets

2.2.6.1. Disaster Management Skills as a Dimension of Preparedness

Disaster preparedness extends beyond awareness and positive attitudes to include practical skills that can be applied during emergencies. Disaster management skills refer to the competencies required to prepare for, respond to, and recover from disaster situations. These include first aid, search and rescue, emergency communication, leadership, teamwork, evacuation support, and community coordination skills (UNDRR, 2015).

The Sendai Framework for Disaster Risk Reduction emphasizes the development of practical capacities and competencies among individuals and communities to improve preparedness and resilience (UNDRR, 2015). Research suggests that preparedness is

significantly influenced by the extent to which individuals possess applicable disaster response skills rather than merely theoretical knowledge (Paton & Johnston, 2017).

Youth organizations such as NCC play an important role in developing these competencies through structured training, practical exercises, drills, camps, and community service activities. The literature indicates that skill-based training enhances confidence, improves response effectiveness, and strengthens community resilience (UNDRR, 2020).

2.2.6.2. First Aid Skills

First aid is one of the most fundamental skills required during disaster situations. It involves providing immediate care to injured individuals before professional medical assistance becomes available. Effective first aid can reduce mortality, prevent complications, and improve survival outcomes during emergencies (World Health Organization [WHO], 2018).

Studies have consistently shown that first aid training improves preparedness among youth volunteers and community members. Bakke et al. (2017) found that participants who received structured first aid training demonstrated greater confidence and competence in responding to emergencies compared to those without training.

Disaster preparedness programmes worldwide increasingly emphasize first aid education because local volunteers are often the first individuals to reach affected populations following disasters. Research by Mobarak et al. (2015) demonstrated that first aid training significantly enhanced emergency response readiness among students and youth volunteers.

In India, disaster management education programmes conducted by NIDM and NDMA identify first aid training as a critical component of community preparedness. Youth organizations, including NCC, NSS, and Scouts and Guides, frequently incorporate first aid instruction into their training activities (NIDM, 2021).

Following the 2018 Kerala floods, several educational institutions and volunteer organizations expanded first aid training initiatives to strengthen community preparedness. KSDMA reports indicate that first aid competencies were considered particularly valuable during rescue and relief operations in flood-affected communities (KSDMA, 2019).

2.2.6.3. Search and Rescue Skills

Search and rescue (SAR) skills involve locating, assisting, and evacuating individuals affected by disasters. These skills include navigation, victim identification, evacuation procedures, basic rescue techniques, and safety management.

The International Federation of Red Cross and Red Crescent Societies (IFRC) identifies search and rescue competencies as essential components of community-based disaster preparedness programmes (IFRC, 2020). Research indicates that trained volunteers contribute significantly to rescue operations, particularly during the initial stages of disasters before professional response teams arrive.

According to Kapucu (2008), community volunteers with basic search and rescue skills can substantially improve emergency response effectiveness by supporting local authorities and emergency services. Such skills are particularly important in flood-prone and landslide-prone regions where immediate community action often determines survival outcomes.

The NDMA promotes basic search and rescue training through school safety programmes, community preparedness initiatives, and youth volunteer training programmes. NCC camps frequently include demonstrations and practical sessions related to rescue techniques and emergency response procedures (NDMA, 2019).

The 2018 Kerala floods highlighted the importance of search and rescue skills among volunteers. Reports indicate that youth volunteers, fishermen, and trained community members played critical roles in supporting rescue operations and evacuation efforts (NIDM, 2021). These experiences have increased interest in strengthening rescue-related competencies among youth organizations, including NCC.

2.2.6.4. Emergency Communication Skills

Communication is a critical component of disaster management because effective response depends on the timely exchange of information among responders, authorities, and affected communities. Emergency communication skills include information dissemination, risk communication, reporting procedures, coordination, and public awareness messaging.

Research suggests that communication failures are among the most common factors contributing to ineffective disaster response (Comfort & Kapucu, 2006). Consequently, disaster preparedness programmes increasingly emphasize communication competencies among volunteers and community responders.

UNDRR (2020) highlights the importance of youth involvement in risk communication and awareness dissemination. Young volunteers often possess strong digital literacy skills, enabling them to use social media and communication technologies to support disaster response activities.

During the Kerala floods, digital communication played a crucial role in coordinating rescue and relief operations. Volunteer networks extensively utilized social media platforms, mobile applications, and online databases to connect affected populations with emergency services (Rajan & Aji, 2020). These experiences demonstrated the value of communication skills among youth volunteers.

2.2.6.5. Leadership and Teamwork Skills

Leadership and teamwork are essential competencies for effective disaster response. Emergencies require individuals to work collaboratively, make decisions under pressure, coordinate resources, and support affected populations.

Research has consistently demonstrated that leadership skills contribute to improved disaster preparedness and response outcomes. According to Paton and Johnston (2017), effective disaster response depends not only on technical skills but also on interpersonal competencies such as leadership, teamwork, communication, and problem-solving.

Youth development programmes often emphasize leadership training because it strengthens decision-making abilities, confidence, responsibility, and community engagement. Studies examining youth volunteer organizations have found that participation in structured group activities enhances teamwork and collaborative problem-solving skills (Pfefferbaum et al., 2018).

Leadership development is one of the central objectives of NCC training. Through camps, drills, adventure activities, and community service programmes, cadets are provided opportunities to develop leadership qualities, team coordination abilities, and organizational skills that are directly relevant to disaster management (Directorate General NCC, 2024).

2.2.6.6. Practical Disaster Response Competencies

Practical disaster response competencies refer to the ability to apply disaster management knowledge and skills in real-world situations. These competencies include conducting evacuations, managing shelters, assisting vulnerable populations, participating in relief distribution, supporting rescue efforts, and maintaining personal safety during emergencies.

Research indicates that experiential learning methods such as simulations, mock drills, and field exercises significantly improve disaster response competencies among youth participants (Johnson et al., 2014). Practical training allows participants to translate theoretical knowledge into action and develop confidence in handling emergency situations.

The UNDRR (2020) emphasizes that disaster preparedness training should prioritize practical skill development rather than relying solely on classroom-based instruction. Youth who participate in drills and simulations demonstrate greater readiness to respond during actual emergencies.

Experiences from the Kerala floods demonstrated that volunteers with prior exposure to disaster preparedness activities were better able to contribute effectively during rescue, relief, and rehabilitation operations (KSDMA, 2019). This finding highlights the importance of practical disaster response competencies in enhancing preparedness.

2.2.6.7. Simulation Exercises and Mock Drills

Recent literature increasingly recognizes simulation exercises and mock drills as important tools for developing disaster management skills. Simulations allow participants to practice emergency procedures, decision-making, communication, and coordination in controlled environments.

Studies suggest that participation in mock drills improves response confidence, emergency preparedness, and disaster management competencies among students and volunteers (Johnson et al., 2014). These activities also help identify gaps in preparedness and provide opportunities for continuous improvement.

Within NCC, mock drills and practical exercises are commonly used to reinforce learning outcomes and develop operational readiness. Such experiential training

approaches contribute significantly to skill acquisition and preparedness development among cadets.

2.2.6.8. Skill Development Through NCC Training

The literature suggests that NCC training contributes to the development of multiple competencies relevant to disaster management, including first aid, leadership, teamwork, discipline, communication, physical fitness, and community service. While limited research specifically evaluates disaster management skills among NCC cadets, available evidence indicates that participation in structured youth programmes enhances preparedness-related competencies (Singh & Sharma, 2021).

However, scholars also argue that increasing disaster risks require continuous updating of training curricula to ensure that youth volunteers possess the practical competencies needed to respond effectively to contemporary disaster challenges. This issue is particularly relevant to the present study because it seeks to assess the extent to which NCC cadets are prepared to contribute to disaster preparedness and response efforts.

2.2.7. Influence of NCC Training on Disaster Preparedness

2.2.7.1. NCC Training as a Mechanism for Disaster Preparedness

Training is widely recognized as one of the most effective methods for enhancing disaster preparedness. Preparedness requires not only awareness and positive attitudes but also practical competencies that enable individuals to respond effectively during emergencies. Disaster preparedness training contributes to the development of knowledge, skills, confidence, and behavioural readiness necessary for disaster risk reduction (UNDRR, 2015).

The National Cadet Corps (NCC) incorporates training activities designed to develop discipline, leadership, teamwork, civic responsibility, and community service. Over time, disaster management has emerged as an increasingly important component of NCC training due to the growing frequency of natural disasters and the expanding role of youth volunteers in emergency management (Directorate General NCC, 2024).

Research indicates that structured training programmes improve preparedness by increasing participants' understanding of hazards, emergency procedures, and disaster

response responsibilities (Paton & Johnston, 2017). Consequently, NCC training can be viewed as an important mechanism for strengthening disaster preparedness among youth.

2.2.7.2. Disaster Management Training Modules in NCC

Disaster management training is incorporated into NCC institutional training programmes, camps, and community service activities. The NCC curriculum includes topics related to disaster awareness, first aid, civil defence, emergency response, rescue operations, environmental protection, and community service (Directorate General NCC, 2024).

According to the NCC training framework, cadets receive instruction on disaster preparedness, risk awareness, emergency response procedures, and public service responsibilities. These modules aim to equip cadets with the knowledge and competencies necessary to assist communities during emergencies.

Research on disaster education suggests that structured disaster management curricula contribute significantly to preparedness outcomes. Johnson et al. (2014) found that disaster education programmes improve preparedness knowledge, increase confidence, and enhance emergency response capabilities among young participants.

Similarly, NIDM (2021) emphasizes that disaster management education should focus on both theoretical understanding and practical skill development. This recommendation aligns with NCC's approach of combining classroom instruction with field-based training activities.

Following the 2018 floods, disaster preparedness training gained increased attention within educational institutions and youth organizations across Kerala. NCC units in the state have increasingly participated in preparedness campaigns, awareness programmes, and disaster-related training activities aimed at strengthening local resilience (KSDMA, 2022).

2.2.7.3. Camps, Drills, and Simulation Exercises

One of the distinctive features of NCC training is its emphasis on practical learning through camps, drills, and simulations. These activities provide opportunities for cadets

to apply theoretical knowledge in controlled environments and develop operational competencies relevant to disaster management.

Simulation-based training is widely recognized as an effective preparedness strategy. Studies have shown that disaster drills improve emergency response knowledge, enhance confidence, and strengthen decision-making abilities during emergencies (Johnson et al., 2014). Simulations also enable participants to practice communication, coordination, and leadership skills under realistic conditions.

The UNDRR (2020) recommends regular disaster drills and simulation exercises as essential components of preparedness programmes because they help identify gaps in readiness and improve response capabilities. Research indicates that participants who engage in simulations demonstrate higher preparedness levels compared to those who receive classroom-based instruction alone (Ronan et al., 2015).

NCC camps frequently incorporate practical activities such as first aid demonstrations, mock rescue operations, evacuation exercises, adventure training, and leadership tasks. These experiences provide cadets with opportunities to practice skills that may be relevant during disaster situations (Directorate General NCC, 2024).

2.2.7.4. Experiential Learning in NCC

Experiential learning refers to the process of acquiring knowledge and skills through direct experience. Contemporary educational theories suggest that experiential learning enhances retention, confidence, and practical competence more effectively than traditional lecture-based approaches (Kolb, 1984).

NCC training is largely experiential in nature. Cadets participate in camps, community service programmes, leadership exercises, social service activities, and field-based learning experiences. These activities allow participants to apply theoretical concepts in practical situations and develop problem-solving abilities.

Research in disaster education consistently demonstrates the value of experiential learning. Shaw et al. (2011) found that practical engagement significantly improves preparedness outcomes because participants gain hands-on experience in managing emergency situations. Similarly, Ronan et al. (2015) reported that experiential approaches increase disaster awareness, preparedness behaviours, and response confidence among youth.

Experiential learning is particularly relevant to disaster preparedness because disasters require individuals to apply knowledge under stressful and unpredictable conditions. Consequently, training programmes that emphasize practical participation tend to produce stronger preparedness outcomes than those relying solely on theoretical instruction.

2.2.7.5. Effectiveness of NCC Training Programmes

The effectiveness of disaster preparedness training is commonly evaluated through changes in knowledge, skills, attitudes, confidence, and behavioural readiness. Research indicates that well-designed training programmes contribute significantly to preparedness outcomes among youth and community volunteers (Paton & Johnston, 2017).

Studies examining disaster education programmes have reported positive impacts on hazard awareness, emergency preparedness knowledge, response confidence, and preparedness behaviours (Johnson et al., 2014). Similar findings have been reported in volunteer training programmes where participants demonstrated improved emergency response capabilities following structured instruction (Pfefferbaum et al., 2018).

Although limited empirical research specifically evaluates NCC disaster management training, available studies suggest that NCC participation contributes to leadership development, civic engagement, discipline, teamwork, and community service orientation (Singh & Sharma, 2021). These competencies are directly relevant to disaster preparedness.

However, some scholars argue that disaster preparedness training must be continuously updated to reflect evolving disaster risks, technological developments, and emerging response requirements. This observation raises important questions regarding the adequacy of current NCC disaster management training modules.

2.2.7.6. Training Outcomes on Preparedness Levels

Preparedness outcomes refer to the measurable effects of training on participants' readiness to respond to disasters. These outcomes typically include improvements in disaster knowledge, practical skills, confidence, risk perception, and willingness to participate in disaster management activities.

Research suggests that training programmes positively influence preparedness levels by increasing awareness and enhancing practical competencies. Paton (2003) found that preparedness behaviours are strongly influenced by education, training, and perceived response capability.

Studies focusing on youth preparedness indicate that participants who receive disaster management training exhibit greater confidence in responding to emergencies and are more likely to engage in preparedness activities (Ronan et al., 2015). Disaster education programmes also contribute to improved communication skills, leadership abilities, and teamwork competencies.

Experiences from the Kerala floods demonstrated the value of preparedness training in improving volunteer effectiveness. Individuals who had received prior training in first aid, disaster preparedness, and emergency response were better equipped to participate in rescue, relief, and rehabilitation activities (KSDMA, 2019).

These findings suggest that training can significantly influence preparedness outcomes among youth volunteers, including NCC cadets.

2.2.7.7. Leadership Development Through NCC Training

Leadership development is one of the primary objectives of NCC training and represents an important contributor to disaster preparedness. Effective disaster response requires individuals who can make decisions, coordinate activities, communicate effectively, and support affected populations under challenging circumstances.

Research indicates that leadership training improves self-efficacy, problem-solving abilities, teamwork, and organizational effectiveness (Pfefferbaum et al., 2018). NCC's emphasis on leadership development therefore contributes indirectly to disaster preparedness by strengthening competencies that are essential during emergencies.

Leadership-oriented training experiences such as camps, group tasks, adventure activities, and community service programmes provide opportunities for cadets to develop confidence and decision-making abilities. These qualities are particularly valuable in disaster situations where rapid action and effective coordination are often required.

2.2.8. Role of NCC Cadets in Recent Disaster Events

2.2.8.1. NCC Cadets in Contemporary Disaster Management

The increasing frequency of natural disasters, climate-related emergencies, and public health crises has expanded the role of youth organizations in disaster management. Among these organizations, the National Cadet Corps (NCC) has emerged as an important support mechanism for disaster preparedness, response, relief, and rehabilitation activities in India. Due to their training, discipline, leadership skills, and widespread presence across educational institutions, NCC cadets have frequently been mobilized during recent disaster events (Directorate General NCC, 2024).

The Sendai Framework for Disaster Risk Reduction emphasizes the participation of youth in disaster preparedness and response activities, recognizing them as important stakeholders in building resilient communities (UNDRR, 2015). NCC cadets represent a structured youth force capable of supporting disaster management agencies through volunteer services, awareness campaigns, relief distribution, and community outreach activities.

Recent disaster events across India have demonstrated the growing involvement of NCC cadets in supporting local administrations and disaster management authorities. These experiences provide valuable insights into the practical roles performed by cadets during emergencies.

2.2.8.2 Participation in Flood Relief Operations

Floods constitute one of the most frequent natural disasters in India and have provided numerous opportunities for NCC cadets to participate in relief and rehabilitation activities.

The 2018 Kerala floods were among the most severe disasters in the state's history. During the disaster, NCC cadets participated in relief material distribution, shelter management, rehabilitation activities, cleaning operations, and awareness campaigns in affected communities. Reports indicate that cadets assisted local authorities in reaching vulnerable populations and supporting relief efforts across multiple districts (KSDMA, 2019).

Studies examining community responses to the Kerala floods emphasize that volunteer engagement significantly enhanced relief effectiveness and community recovery. Youth volunteers, including NCC cadets, contributed to strengthening local resilience through direct community support and rehabilitation activities (Thomas et al., 2023).

NCC cadets have also been actively involved in flood relief operations in Assam and Bihar. Activities included distribution of food supplies, assistance at relief camps, support for evacuation efforts, and dissemination of public safety information. Ministry of Defence reports identify these activities as examples of NCC's contribution to disaster management and community service (Ministry of Defence, 2021).

These cases demonstrate the capacity of NCC cadets to function as supplementary volunteer resources during large-scale flood emergencies.

2.2.8.3 Response During Cyclones and Landslides

Cyclones and landslides have increasingly affected several regions of India, requiring coordinated response efforts involving government agencies and volunteer organizations.

Cyclone Fani affected Odisha and neighbouring states, resulting in widespread damage and displacement. NCC cadets participated in awareness campaigns, evacuation support, relief material distribution, and rehabilitation activities. Their involvement demonstrated the usefulness of organized youth volunteers in supporting emergency response operations (Ministry of Defence, 2021).

During Cyclone Amphan, NCC cadets assisted local authorities in public awareness activities, distribution of essential supplies, and community support programmes. These interventions helped strengthen response efforts and facilitate communication between communities and government agencies (Directorate General NCC, 2024).

Kerala has experienced multiple landslide events in districts such as Wayanad, Idukki, and Kottayam. Following these incidents, NCC cadets participated in community support programmes, relief activities, awareness campaigns, and rehabilitation initiatives. Such involvement highlights the adaptability of NCC cadets in responding to diverse disaster contexts (KSDMA, 2022).

Research suggests that trained youth volunteers play a particularly important role during localized disasters because they can be mobilized rapidly and possess familiarity with local conditions (Kapucu, 2008).

2.2.8.4 Awareness Campaigns and Community Outreach Activities

Disaster management increasingly emphasizes preparedness and risk reduction rather than focusing solely on post-disaster response. NCC cadets contribute to these efforts through awareness campaigns, preparedness programmes, and community outreach activities.

The Directorate General NCC identifies disaster awareness programmes, environmental campaigns, first aid demonstrations, road safety initiatives, and community preparedness activities as important components of cadet service activities (Directorate General NCC, 2024).

Research indicates that youth-led awareness campaigns can improve public understanding of disaster risks and encourage preparedness behaviours. Young volunteers often function as effective communicators because of their ability to engage schools, colleges, families, and community groups (Pfefferbaum et al., 2018).

Following the Kerala floods, NCC units actively participated in flood preparedness campaigns, environmental conservation initiatives, disaster awareness programmes, and community resilience activities. These efforts aimed to strengthen public awareness regarding disaster risks and preparedness measures (KSDMA, 2022).

The increasing emphasis on awareness activities reflects a broader shift toward disaster risk reduction and community resilience-building approaches.

2.2.8.5 Coordination with Disaster Management Agencies

Effective disaster management depends on collaboration among government agencies, disaster management authorities, emergency responders, civil society organizations, and volunteers. NCC cadets frequently operate within these collaborative frameworks.

The Disaster Management Act, 2005 emphasizes the importance of community participation and volunteer engagement in disaster management activities (Government of India, 2005). NCC cadets are often mobilized in coordination with district

administrations, state disaster management authorities, local governments, police departments, and health services.

Research on emergency management networks suggests that organized volunteer groups contribute more effectively when integrated into formal coordination structures (Kapucu, 2008). NCC's hierarchical organizational framework facilitates communication, supervision, and accountability, making it easier for disaster management agencies to mobilize cadets during emergencies.

The response to the 2018 Kerala floods highlighted the importance of multi-agency coordination. NCC cadets worked alongside KSDMA, district administrations, local self-governments, emergency services, and community organizations. Such collaborative efforts enhanced operational efficiency and improved the delivery of relief services (KSDMA, 2019).

2.2.8.6 NCC Cadets During the COVID-19 Pandemic

The COVID-19 pandemic represents an important example of NCC involvement in a non-traditional disaster context. Across India, NCC cadets assisted state administrations through awareness campaigns, mask distribution, crowd management, logistical support, and public health communication activities (Ministry of Defence, 2021).

The Ministry of Defence reported that tens of thousands of NCC cadets volunteered during the pandemic to support local authorities. Their participation demonstrated the flexibility of NCC as a volunteer resource capable of contributing to diverse emergency situations.

Studies examining volunteer engagement during public health emergencies emphasize that youth participation can strengthen risk communication and improve community outreach efforts (UNDRR, 2020).

2.2.9. Gaps Between NCC Training and Community Disaster Management Needs

2.2.9.1 Training–Practice Gap in Disaster Preparedness

Disaster management literature consistently emphasizes that preparedness depends not only on knowledge acquisition but also on the ability to apply knowledge effectively during emergencies. While many youth training programmes provide theoretical

instruction, several studies indicate that gaps often exist between training content and the practical realities encountered during disaster situations (Paton & Johnston, 2017).

The Sendai Framework for Disaster Risk Reduction stresses the need for practical, community-oriented preparedness programmes capable of addressing local disaster risks and vulnerabilities (UNDRR, 2015). However, research suggests that disaster preparedness training frequently focuses on awareness creation while providing limited opportunities for operational experience and practical skill development (UNDRR, 2020).

Within the NCC context, disaster management is included as part of broader training activities. Nevertheless, limited empirical evidence exists regarding the extent to which cadets are adequately prepared to meet community disaster management needs. This gap highlights the importance of assessing whether existing NCC training translates into effective preparedness outcomes.

2.2.9.2 Limitations in Current Training

One of the most frequently identified challenges in disaster preparedness programmes is the limited emphasis on practical application. Disaster education often focuses on awareness and theoretical knowledge while providing insufficient opportunities for field-based learning, simulation exercises, and operational training (Johnson et al., 2014).

Research conducted among youth volunteers indicates that preparedness training may improve knowledge but does not necessarily guarantee operational competence during emergencies (Ronan et al., 2015). Participants often report confidence in disaster concepts while expressing uncertainty regarding practical response activities.

Studies examining volunteer preparedness programmes have also identified limitations related to training duration, insufficient refresher courses, inadequate practical exercises, and limited exposure to real-world disaster scenarios (Paton & Johnston, 2017).

Although NCC training includes disaster management components, few studies have evaluated whether these modules provide sufficient depth regarding disaster risk reduction, emergency response procedures, and community-based disaster management. Available literature suggests the need for more systematic assessment of

training outcomes and preparedness competencies among cadets (Directorate General NCC, 2024).

2.2.9.3 Mismatch Between Training and Field Realities

A recurring finding in disaster management literature is the existence of a mismatch between training environments and actual disaster conditions. Real-world disasters are characterized by uncertainty, resource constraints, communication challenges, emotional stress, and complex coordination requirements that are difficult to replicate in training settings (Kapucu, 2008).

Studies examining disaster response experiences have shown that volunteers often encounter situations for which they feel inadequately prepared despite having received prior training. This observation suggests that training programmes may not always reflect the realities of field operations (Comfort & Kapucu, 2006).

Experiences from the 2018 Kerala floods highlighted the complexity of disaster response operations. Volunteers faced challenges related to logistics, communication, coordination, and rapidly changing conditions. Reports indicate that many volunteers learned important lessons through direct participation rather than formal training programmes (KSDMA, 2019).

These findings raise important questions regarding whether current NCC training adequately prepares cadets for the dynamic and unpredictable nature of contemporary disasters.

2.2.9.4 Community Expectations from NCC Volunteers

Community-based disaster management approaches increasingly recognize volunteers as important local resources. Consequently, communities often expect trained youth volunteers to possess practical skills and provide meaningful support during emergencies.

Research suggests that communities expect volunteers to contribute in areas such as first aid, evacuation support, emergency communication, awareness generation, relief distribution, and assistance to vulnerable populations (IFRC, 2020). These expectations extend beyond general awareness and require specific operational competencies.

Studies on volunteer engagement indicate that communities place greater trust in trained and organized volunteer groups than in unstructured volunteer networks because organized groups are perceived as more reliable and accountable (UNDRR, 2020).

As one of India's largest organized youth organizations, NCC is often viewed as a potential support mechanism during disasters. Consequently, communities may expect NCC cadets to possess competencies related to disaster preparedness, leadership, communication, and emergency response. However, there is limited research examining whether cadets themselves feel adequately prepared to meet these expectations.

2.2.9.5 Need for Advanced Disaster Response Competencies

Contemporary disasters increasingly require specialized competencies that extend beyond basic preparedness knowledge. Climate-related disasters, technological hazards, public health emergencies, and complex humanitarian crises demand advanced skills in communication, coordination, information management, psychosocial support, and risk assessment (UNDRR, 2020).

Research indicates that modern disaster preparedness programmes should incorporate training related to:

- Advanced first aid and emergency medical support
- Search and rescue operations
- Incident command systems
- Emergency communication technologies
- Geographic Information Systems (GIS)
- Digital disaster management tools
- Psychosocial first aid
- Community-based disaster risk reduction
- Climate change adaptation and resilience

(Paton & Johnston, 2017; UNDRR, 2020)

Kerala's increasing exposure to floods, landslides, coastal hazards, and extreme weather events has created demand for volunteers with advanced preparedness competencies.

KSDMA reports emphasize the importance of strengthening local volunteer capacities and improving technical preparedness at the community level (KSDMA, 2022).

These developments suggest that NCC training programmes may need to evolve to address emerging disaster risks and changing community needs.

2.2.9.6 Coordination and Inter-Agency Challenges

Effective disaster management depends heavily on coordination among multiple stakeholders. However, disaster literature consistently identifies coordination challenges as a major obstacle to effective response operations (Comfort & Kapucu, 2006).

Volunteers frequently report difficulties understanding organizational structures, communication channels, and reporting procedures during emergencies. These challenges can reduce operational efficiency and limit the effectiveness of volunteer contributions (Kapucu, 2008).

Research suggests that preparedness programmes should provide greater emphasis on inter-agency coordination, emergency management structures, and collaborative response mechanisms. Such competencies are particularly relevant for NCC cadets because they often operate alongside government agencies, local administrations, and disaster management authorities.

2.3 THEORETICAL FRAMEWORK

A theoretical framework provides the conceptual foundation for a research study by explaining the relationships among the key concepts and variables under investigation. It helps the researcher understand the phenomenon being studied, guides the formulation of research objectives, and provides a basis for interpreting the results. The present study, "Preparedness of NCC Cadets in Disaster Management," is guided by David Kolb's Experiential Learning Theory (1984). The theory is considered appropriate because disaster preparedness is developed not only through theoretical knowledge but also through practical experiences, reflection, and continuous application of learning. Since the National Cadet Corps (NCC) emphasizes experiential learning through institutional training, camps, first aid programmes, community

service, leadership activities, disaster awareness campaigns, and mock drills, Kolb's theory provides a suitable framework for understanding how these learning experiences contribute to the preparedness of NCC cadets.

The present study aims to assess the preparedness of NCC cadets in disaster management by examining their knowledge, attitudes, and skills, understanding the influence of NCC training on disaster preparedness, exploring the roles played by NCC cadets during disaster events, and identifying the gap between NCC training and community disaster management needs.

Experiential Learning Theory provides an appropriate theoretical basis for the study because NCC training is primarily based on learning through experience. Activities such as first aid training, leadership development, disaster awareness programmes, annual training camps, mock drills, and community service create opportunities for experiential learning among cadets. Through repeated participation in these activities, cadets are expected to acquire disaster-related knowledge, develop positive attitudes towards disaster management, improve practical skills, and enhance their preparedness to contribute to disaster risk reduction and emergency response.

The theory also explains that effective preparedness depends on continuous learning through experience, reflection, conceptual understanding, and practical application. Therefore, experiential learning provides a useful perspective for examining how NCC training contributes to disaster preparedness and whether the existing training experiences adequately equip cadets to meet community disaster management needs.

Accordingly, Kolb's Experiential Learning Theory serves as the theoretical foundation for the present study by explaining how experiential learning within NCC training contributes to the development of disaster preparedness among cadets.

2.4 RESEARCH GAP ANALYSIS

The review of literature indicates that considerable research has been conducted on disaster management, disaster risk reduction, community resilience, youth participation, and volunteer engagement in disaster preparedness. Previous studies have established that youth organizations play an important role in strengthening community resilience through awareness programmes, disaster preparedness activities, and

emergency response initiatives (UNDRR, 2015; Pfefferbaum et al., 2018). Similarly, literature on the National Cadet Corps (NCC) highlights its contribution to nation-building, leadership development, community service, disaster awareness, and participation in relief and rehabilitation activities (Directorate General NCC, 2024). Although the existing literature documents the involvement of NCC cadets in various disaster-related activities, most studies primarily focus on their participation during disasters rather than evaluating their actual level of preparedness. There is limited empirical evidence assessing whether NCC cadets possess adequate disaster management knowledge, attitudes, and practical skills required to effectively contribute to disaster preparedness and disaster risk reduction.

Another important gap identified in the literature is the limited evaluation of the effectiveness of NCC disaster management training. While studies acknowledge that NCC training includes disaster awareness, first aid, leadership development, and community service, very few have examined the extent to which these training modules enhance disaster preparedness among cadets or prepare them for real disaster situations. The literature further reveals inadequate attention to the actual roles performed by NCC cadets during recent disaster events. Although reports describe their participation in flood relief, rehabilitation, awareness campaigns, and emergency support activities, empirical studies assessing the nature and extent of their involvement remain scarce.

Another significant gap is the absence of studies examining the alignment between NCC disaster management training and community disaster management needs. Existing literature recognizes the importance of practical, community-based, and experiential learning but provides limited evidence on whether current NCC training adequately equips cadets to meet community expectations during disasters. Finally, despite Kerala being one of the most disaster-prone states in India, with recurrent floods, landslides, cyclones, and coastal hazards, very limited research has specifically examined the preparedness of NCC cadets within the Kerala context. This geographical gap highlights the need for localized evidence to strengthen disaster preparedness and youth participation in disaster management.

Therefore, the present study seeks to address these gaps by assessing the preparedness of NCC cadets in terms of their knowledge, attitudes, and skills, examining the influence of NCC training on disaster preparedness, exploring the roles played by NCC

cadets in recent disaster events, and identifying the gap between NCC training and community disaster management needs. The study aims to contribute empirical evidence that can support the strengthening of NCC disaster management training and enhance the role of NCC cadets in disaster risk reduction and community resilience.

CHAPTER III
RESEARCH METHODOLOGY

3.1 INTRODUCTION

Research methodology is the systematic, logical, and scientific process used to conduct research and generate reliable knowledge. It provides the overall framework that guides the researcher in identifying the research problem, selecting appropriate methods, collecting relevant data, analyzing findings, and drawing meaningful conclusions. A well-defined research methodology ensures that the study is conducted in a structured, objective, and ethical manner, thereby enhancing the validity and reliability of the research findings (Kothari, 2004). The selection of an appropriate methodology is influenced by the nature of the research problem, the objectives of the study, the type of data required, and the intended outcomes of the research.

The present study, titled "Preparedness of NCC Cadets in Disaster Management," seeks to understand how prepared NCC cadets are to contribute to disaster preparedness and disaster risk reduction. The study specifically focuses on assessing the knowledge, attitude, and skills of NCC cadets related to disaster management, examining the influence of NCC training modules in preparing cadets for disaster risk reduction, exploring the roles played by NCC cadets during recent disaster events, and identifying the gaps between NCC training and community disaster management needs. Since these objectives require the collection and analysis of measurable data from a defined group of respondents, a quantitative research approach was considered appropriate for the study.

A quantitative approach enables the researcher to collect standardized data from a larger number of respondents through structured research instruments and to analyze the data using statistical techniques. It facilitates objective measurement of variables and allows the researcher to identify patterns, relationships, and trends within the data (Creswell & Creswell, 2018). In the present study, quantitative methods provide an effective means of assessing the preparedness levels of NCC cadets and interpreting the findings in relation to the research objectives.

Primary data for the study were collected using a self-structured questionnaire administered to NCC cadets. The questionnaire was designed based on the objectives of the study and consisted of items related to demographic characteristics, disaster management knowledge, attitudes towards disaster preparedness, practical skills, influence of NCC training, participation in disaster events, and perceived gaps between

NCC training and community disaster management needs. Secondary data were obtained from books, peer-reviewed journals, government reports, policy documents, NCC training manuals, and publications of organizations such as the National Disaster Management Authority (NDMA), Kerala State Disaster Management Authority (KSDMA), and the United Nations Office for Disaster Risk Reduction (UNDRR).

This chapter presents the methodological framework adopted for the study. It includes the title of the study, definition of key concepts, pilot study, pre-test, research design, description of the research site and participants, sampling strategy, data collection procedures, data analysis techniques, ethical considerations, and the assumptions, limitations, and scope of the study. These methodological components provide a systematic basis for conducting the research and ensure that the findings are scientifically sound, ethically conducted, and aligned with the objectives of the study.

3.2 TITLE OF THE STUDY

“Preparedness of NCC Cadets in Disaster Management”

3.3 OBJECTIVES OF THE STUDY

General Objective

To understand how prepared NCC cadets are to contribute to disaster management.

Specific Objectives

1. To understand the current level of disaster preparedness (knowledge, attitude, and skills) among NCC cadets.
2. To understand the influence of NCC training modules in preparing cadets for disaster risk reduction.
3. To understand the roles played by NCC cadets in recent disaster events.
4. To identify the gaps between NCC training and community disaster management needs.

3.4 DEFINITION OF CONCEPTS

Table 3.4.1: Conceptual and Operational definitions of concepts

CONCEPTS	CONCEPTUAL DEFINITION	OPERATIONAL DEFINITION
1. Disaster Preparedness	"Disaster preparedness refers to the knowledge, capacities, and actions developed by individuals and communities to anticipate, respond to, and recover from disaster situations effectively" (UNDRR, 2015).	In the present study, disaster preparedness refers to the readiness of NCC cadets to contribute to disaster management activities, measured through their knowledge, attitudes, and skills related to disaster preparedness and disaster response.
2. NCC Cadets	"NCC cadets are students enrolled in the National Cadet Corps, a voluntary youth organization established to develop leadership, discipline, character, and a spirit of service among young citizens" (Directorate General NCC, 2024).	In the present study, NCC cadets refer to the respondents who are enrolled in NCC units and are undergoing NCC training in the selected educational institutions
3. Knowledge	"Knowledge refers to the understanding and awareness acquired through education, training, and experience regarding a particular subject" (Bloom et al., 1956).	In this study, knowledge refers to the respondents' understanding of disaster risks, disaster preparedness measures, emergency procedures, and disaster response protocols, measured through the

		knowledge scale in the questionnaire.
4. Attitude	"Attitude refers to an individual's beliefs, feelings, and predispositions towards a particular object, issue, or activity" (Ajzen, 1991).	In this study, attitude refers to the perceptions and willingness of NCC cadets to participate in disaster preparedness and disaster management activities, measured through attitude-related statements in the questionnaire.
5. Skills	"Skills are learned abilities that enable individuals to perform tasks effectively and efficiently" (WHO, 2018).	In this study, skills refer to the practical competencies of NCC cadets related to disaster management, including first aid, emergency communication, leadership, teamwork, and disaster response, measured through the skills assessment items in the questionnaire.

3.5 PILOT STUDY

A pilot study is a small-scale preliminary investigation conducted before the main study to assess the feasibility of the research, identify potential problems, and improve the research instrument and data collection procedures. It enables the researcher to evaluate the clarity, relevance, sequence, and appropriateness of the questionnaire, as well as the time required for data collection. A pilot study also helps to identify ambiguities in the

questions and ensures that the instrument adequately addresses the objectives of the study (Kothari, 2004).

For the present study, a pilot study was conducted among 10 NCC cadets who possessed characteristics similar to those of the respondents selected for the main study. These participants were not included in the final sample of 71 respondents to avoid any influence on the main findings. The pilot study was carried out after obtaining the necessary permission from the concerned authorities and informed consent from the participants.

The pilot study aimed to assess the clarity and comprehensibility of the questionnaire, determine whether the questions were relevant to the research objectives, estimate the time required to complete the questionnaire, and identify any practical difficulties that might arise during data collection. The respondents were encouraged to provide feedback regarding the wording, sequence, and relevance of the questions.

The pilot study also confirmed that the questionnaire was appropriate for assessing the preparedness of NCC cadets in disaster management and that the respondents were able to understand and complete the questionnaire without major difficulties. Therefore, the revised questionnaire was finalized and used for the collection of data in the main study.

3.6 RESEARCH DESIGN

A research design is the overall plan or blueprint that guides the process of conducting a research study. It provides a systematic framework for collecting, measuring, and analysing data to answer the research questions and achieve the objectives of the study. An appropriate research design ensures that the research is conducted in a logical, objective, and scientifically sound manner, thereby enhancing the validity and reliability of the findings (Creswell & Creswell, 2018).

The present study adopted a quantitative research approach using a cross-sectional research design. A quantitative approach was considered appropriate because the study aimed to collect measurable data from NCC cadets and analyse their level of disaster preparedness using statistical methods. The quantitative approach facilitates objective measurement of variables such as knowledge, attitude, skills, influence of NCC

training, involvement in disaster events, and perceived gaps between NCC training and community disaster management needs.

A cross-sectional design was adopted because the data were collected from the respondents at a single point in time. This design was suitable for obtaining a snapshot of the current level of preparedness among NCC cadets without requiring repeated observations or follow-up assessments. The cross-sectional approach facilitated the efficient collection of data from a relatively large group of respondents within the available time frame and resources.

The research design also enabled the researcher to compare disaster preparedness across different demographic characteristics such as gender, year of study, NCC wing, duration of NCC experience, and previous participation in disaster-related activities

The cross-sectional design was therefore considered appropriate for the present study because it allowed for the systematic assessment of the preparedness of NCC cadets in disaster management while providing quantitative evidence regarding the influence of NCC training, the roles played by cadets in recent disaster events, and the gaps between NCC training and community disaster management needs. The design ensured that the data collected were directly aligned with the objectives of the study and facilitated meaningful interpretation of the findings.

3.7 UNIVERSE AND UNIT OF STUDY

The universe of a study refers to the entire population that possesses the characteristics relevant to the research and from which the sample is drawn. It includes all individuals or units that are eligible to participate in the study and to whom the findings may be generalized (Kothari, 2004).

For the present study, the universe comprised National Cadet Corps (NCC) cadets enrolled in colleges in Kollam. These cadets belong to different NCC wings and have undergone NCC training that includes activities related to leadership, community service, and disaster management. Since the study focuses on disaster preparedness among NCC cadets, the universe consisted of cadets who had actively participated in NCC training programmes and were available during the period of data collection.

The unit of study refers to the individual element from which information is collected for the purpose of analysis. In the present study, the individual NCC cadet constituted the unit of study. Each respondent was treated as an independent unit of analysis, and information was collected regarding demographic characteristics, disaster management knowledge, attitudes, practical skills, the influence of NCC training, involvement in disaster-related activities, and perceptions of the gap between NCC training and community disaster management needs.

A total of 71 NCC cadets participated in the study. Each respondent provided information through a structured questionnaire, and their responses formed the basis for the analysis and interpretation of the findings. The unit of study was therefore appropriate for achieving the objectives of assessing the preparedness of NCC cadets in disaster management and understanding the factors influencing their preparedness.

3.8 SAMPLING DESIGN

Sampling is the process of selecting a subset of individuals from a larger population to represent the characteristics of the entire population. An appropriate sampling design enables the researcher to collect relevant information efficiently while ensuring that the selected respondents are suitable for addressing the research objectives. The choice of sampling technique depends on the nature of the study, research objectives, availability of respondents, and the characteristics of the target population (Kothari, 2004).

The present study employed purposive sampling to select the respondents. Purposive sampling is a technique in which participants are deliberately selected by the researcher based on specific characteristics relevant to the objectives of the study. This method is particularly useful when the researcher requires respondents who possess specific knowledge, experience, or exposure related to the phenomenon being investigated (Creswell & Creswell, 2018).

Purposive sampling was considered appropriate for the present study because the research specifically focused on National Cadet Corps (NCC) cadets who had undergone NCC training and were capable of providing relevant information regarding disaster preparedness. Since the study intended to assess the preparedness of NCC cadets in terms of their knowledge, attitudes, skills, the influence of NCC training, their

involvement in disaster-related activities, and their perceptions regarding gaps between NCC training and community disaster management needs, selecting respondents with direct experience of NCC training was essential.

Accordingly, respondents were selected based on predetermined eligibility criteria. A total of 71 NCC cadets who fulfilled the inclusion criteria participated in the study. The selected respondents represented different years of study, NCC wings, levels of NCC experience, and disaster-related exposure, thereby providing a comprehensive understanding of disaster preparedness among NCC cadets.

The use of purposive sampling enabled the researcher to collect detailed and relevant information from respondents who were directly associated with the objectives of the study. Although the findings cannot be generalized to all NCC cadets in India, the selected sample adequately represented the target population relevant to the present research and provided meaningful insights into the preparedness of NCC cadets in disaster management.

3.8.1 Inclusion Criteria

The following respondents were included in the study:

- NCC cadets who were actively enrolled in the National Cadet Corps during the period of data collection.
- NCC cadets who voluntarily agreed to participate in the study.
- Respondents who provided informed consent before participating in the research.

3.8.2 Exclusion Criteria

The following respondents were excluded from the study:

- Individuals who were not enrolled as NCC cadets.
- NCC cadets who had discontinued NCC training before the study.
- Cadets enrolled in Airforce wing are excluded

3.9 DATA COLLECTION

Data collection is a systematic process of gathering relevant information from respondents to address the research objectives. The quality and accuracy of the collected data significantly influence the validity and reliability of the research findings. Therefore, careful planning and appropriate data collection procedures are essential for obtaining meaningful and dependable information (Kothari, 2004).

For the present study, both primary and secondary data were collected.

3.9.1 Primary Data

Primary data were collected directly from the respondents using a self-structured questionnaire designed by the researcher based on the objectives of the study and an extensive review of relevant literature. The questionnaire was prepared to assess the preparedness of NCC cadets in disaster management and consisted of items related to demographic characteristics, disaster management knowledge, attitudes, practical skills, the influence of NCC training, roles played by NCC cadets in recent disaster events, and perceived gaps between NCC training and community disaster management needs.

Prior to data collection, permission was obtained from the concerned authorities of the selected institutions. The purpose of the study was clearly explained to the respondents, and informed consent was obtained before administering the questionnaire. Participation in the study was entirely voluntary, and respondents were assured that the information provided would be kept confidential and used solely for academic research purposes.

The questionnaires were administered directly to the selected NCC cadets who met the inclusion criteria. After completion, the questionnaires were checked for completeness, and incomplete responses were excluded from the analysis. A total of 71 completed questionnaires were found suitable for data analysis and were included in the final study.

3.9.2 Secondary Data

Secondary data were collected to provide theoretical support and contextual understanding for the study. These data were obtained from various published and unpublished sources, including books, peer-reviewed journals, research articles, dissertations, conference proceedings, government reports, policy documents, official NCC publications, and reports from national and international organizations.

Relevant documents from organizations such as the National Disaster Management Authority (NDMA), Kerala State Disaster Management Authority (KSDMA), National Cadet Corps (NCC), United Nations Office for Disaster Risk Reduction (UNDRR), and the International Federation of Red Cross and Red Crescent Societies (IFRC) were reviewed to understand disaster preparedness, disaster risk reduction, youth participation, and the role of NCC in disaster management. Secondary data also supported the development of the research instrument and the interpretation of the study findings.

3.9.3 Research tool

The primary data collection instrument used in the study was a self-structured questionnaire developed by the researcher. The questionnaire was designed based on the research objectives and relevant literature related to disaster management, disaster preparedness, and NCC training.

The questionnaire consisted of seven sections, namely:

- Section A: Demographic Profile
- Section B: Knowledge regarding Disaster Management
- Section C: Attitude towards Disaster Preparedness
- Section D: Disaster Management Skills and Practical Preparedness
- Section E: Influence of NCC Training on Disaster Preparedness
- Section F: Role of NCC Cadets in Recent Disaster Events
- Section G: Gaps between NCC Training and Community Disaster Management Needs

3.10 PRE-TEST

A pre-test is conducted before the main data collection to evaluate the suitability, clarity, relevance, and effectiveness of the research instrument. It helps identify ambiguous questions, assess the sequence and wording of items, estimate the time required for completion, and ensure that the questionnaire accurately measures the variables under study. Conducting a pre-test improves the validity and reliability of the research instrument and minimizes potential errors during the actual data collection process (Kothari, 2004).

For the present study, the self-structured questionnaire was pre-tested among NCC cadets who possessed characteristics similar to those of the respondents selected for the main study. The respondents selected for the pre-test were not included in the final sample to avoid any influence on the findings of the main study.

The pre-test was conducted to examine whether the questions were clear, understandable, and relevant to the objectives of the study. It also helped determine whether the response options were appropriate, whether the sequence of questions followed a logical order, and whether respondents experienced any difficulty while completing the questionnaire. The time required to complete the questionnaire was also assessed during the pre-test.

Based on the feedback received from the respondents and suggestions provided by the research guide, minor modifications were made to improve the quality of the questionnaire. Certain statements were reworded to improve clarity and simplicity, repetitive items were revised, and the sequence of a few questions was rearranged to enhance the logical flow of the instrument. Necessary corrections were also made to improve the language and formatting of the questionnaire.

After incorporating these modifications, the questionnaire was finalized and used for the collection of primary data from the selected sample of 71 NCC cadets. The pre-test ensured that the research instrument was appropriate, comprehensible, and capable of collecting reliable and relevant data for achieving the objectives of the study.

3.11 DATA ANALYSIS

Data analysis is the process of organizing, classifying, summarizing, and interpreting the collected data to derive meaningful conclusions and achieve the objectives of the

study. It enables the researcher to transform raw data into useful information by applying appropriate statistical techniques, thereby facilitating systematic interpretation and presentation of the findings (Creswell & Creswell, 2018).

After the completion of data collection, the questionnaires were carefully scrutinized to ensure completeness, consistency, and accuracy. The responses were edited, coded, and entered into IBM Statistical Package for the Social Sciences (IBM SPSS Statistics) Version 22 for analysis. The software facilitated efficient data management, statistical analysis, and graphical presentation of the findings.

The analysis primarily employed descriptive statistical techniques to summarize and interpret the data. Frequency distributions and percentages were used to describe the demographic characteristics of the respondents and the distribution of the major study variables. Pie charts were prepared to provide a visual representation of respondent's levels of knowledge, attitude, skills, influence of NCC training, involvement in recent disaster events, and perceptions regarding the gap between NCC training and community disaster management needs.

To examine the relationship between demographic characteristics and the major study variables, cross-tabulation was performed. Crosstab analysis enabled the comparison of respondent's knowledge, attitude, skills, perceived influence of NCC training, involvement in disaster events, and perceived gaps across selected demographic variables such as gender, year of study, NCC wing, duration of NCC experience, and participation in disaster-related activities.

For the purpose of interpretation, composite scores were calculated for the major variables. Based on predetermined cut-off values, respondents were categorized into the following groups:

- Knowledge: Adequate knowledge and Inadequate knowledge
- Attitude: Appropriate attitude and Inappropriate attitude
- Skills: Adequate skills and Inadequate skills
- Influence of NCC Training: Low influence and High influence
- Role in Recent Disaster Events: Low involvement and High involvement
- Gap between NCC Training and Community Disaster Management Needs: Presence of gap and Absence of gap

The analysed data were presented systematically in the form of tables, charts, frequencies, percentages, and cross-tabulations. The findings were interpreted objectively in relation to the research objectives and discussed with support from relevant literature to draw meaningful conclusions regarding the preparedness of NCC cadets in disaster management.

3.12 ETHICAL CONSIDERATIONS

Ethical considerations are an integral part of the research process, particularly when the study involves human participants. Adhering to ethical principles ensures that the rights, dignity, privacy, and well-being of the participants are protected throughout the study. The present research was conducted in accordance with the fundamental ethical principles of social science research, including informed consent, voluntary participation, confidentiality, anonymity, beneficence, and respect for participants (Israel & Hay, 2006).

Prior to the commencement of data collection, permission was obtained from the concerned authorities of the selected institutions to conduct the study. The purpose, objectives, and significance of the research were clearly explained to the participants before administering the questionnaire.

Participation in the study was entirely voluntary. Respondents were informed that their participation was based solely on their willingness and that they had the right to refuse participation or withdraw from the study at any stage without any consequences or disadvantage. No respondent was subjected to coercion or undue influence to participate in the research.

Informed consent was obtained from all respondents before collecting data. The participants were provided with adequate information regarding the objectives of the study, the nature of their participation, the estimated time required to complete the questionnaire, and the intended use of the information collected. Only those respondents who willingly consented were included in the study.

The researcher ensured the confidentiality and anonymity of all participants. No personal identifiers, such as names or registration numbers, were collected through the questionnaire. The information provided by the respondents was used solely for

academic purposes and was not disclosed to any unauthorized individual or organization. The collected data were stored securely and were accessible only to the researcher and the research supervisor.

The principle of privacy was maintained throughout the study. Respondents were given sufficient time and freedom to complete the questionnaire without any pressure or interference. They were also assured that their responses would remain confidential and that the findings would be presented only in aggregate form.

Throughout the research process, the researcher-maintained honesty, integrity, and objectivity in data collection, analysis, interpretation, and reporting. The findings presented in the study are based entirely on the data collected from the respondents without fabrication, falsification, or manipulation. Proper acknowledgment has been given to all published sources through appropriate citations and references, thereby avoiding plagiarism and maintaining academic integrity.

Thus, the present study was conducted in accordance with accepted ethical standards for social science research, ensuring respect for the rights, dignity, and welfare of all participants.

3.13 ASSUMPTIONS, LIMITATIONS AND SCOPE OF THE STUDY

3.13.1 Assumptions

The present study was based on the following assumptions:

- It was assumed that the respondents possessed a basic understanding of disaster management and NCC training activities.
- It was assumed that the respondents answered the questionnaire honestly and accurately based on their knowledge, experiences, and perceptions.
- It was assumed that the self-structured questionnaire was an appropriate instrument for assessing the preparedness of NCC cadets in disaster management.
- It was assumed that the respondents' knowledge, attitudes, skills, and perceptions reflected their actual level of disaster preparedness.

- It was assumed that the selected sample was sufficiently representative of the target population for the purpose of achieving the research objectives.

3.13.2 Limitations of the Study

The present study had the following limitations:

- The study was limited to 71 NCC cadets, which may not represent the preparedness of all NCC cadets across India.
- The study adopted a quantitative research approach; therefore, it did not explore respondents' experiences, opinions, or perceptions in depth through qualitative methods.
- The study relied on self-reported responses, which may be influenced by social desirability or recall bias.
- The study assessed preparedness at a single point in time using a cross-sectional design; therefore, changes in preparedness over time could not be examined.
- The study focused only on selected dimensions of preparedness, namely knowledge, attitude, skills, influence of NCC training, involvement in recent disaster events, and perceived gaps between NCC training and community disaster management needs.
- The findings are limited to the respondents who participated in the study and should be generalized with caution.

3.13.3 Scope of the Study

The scope of the study defines the extent and boundaries within which the research was conducted.

The present study focused on assessing the preparedness of National Cadet Corps (NCC) cadets in disaster management. It examined preparedness through the dimensions of knowledge, attitude, and practical skills, while also assessing the influence of NCC training, the roles played by NCC cadets in recent disaster events, and the perceived gap between NCC training and community disaster management needs.

The study was conducted among 71 NCC cadets selected through purposive sampling using a structured questionnaire. The findings provide empirical evidence regarding the

current level of disaster preparedness among NCC cadets and identify areas requiring improvement within existing NCC disaster management training programmes.

The study contributes to the fields of disaster management, social work, youth volunteerism, and disaster risk reduction by generating evidence on the preparedness of NCC cadets. The findings may assist NCC authorities, educational institutions, disaster management agencies, and policy makers in strengthening disaster preparedness programmes, improving practical disaster management training, and promoting greater youth participation in disaster risk reduction initiatives.

Furthermore, the study provides a foundation for future research on disaster preparedness among youth volunteers and encourages the development of more comprehensive, competency-based disaster management training programmes within the National Cadet Corps.

CHAPTER IV
DATA ANALYSIS AND INTERPRETATION

DATA ANALYSIS AND INTERPRETATION

4.1 INTRODUCTION

Data analysis is an important stage of the research process, as it transforms the collected data into meaningful information that addresses the research objectives. It involves organizing, summarizing, interpreting, and presenting the collected data in a systematic manner to facilitate understanding and draw valid conclusions. The purpose of data analysis is not only to describe the characteristics of the respondents but also to identify patterns, relationships, and trends related to the phenomenon under study.

The present study aims to assess the preparedness of National Cadet Corps (NCC) cadets in disaster management by examining their knowledge, attitude, skills, the influence of NCC training, involvement in disaster events, and the perceived gap between NCC training and community disaster management needs. The data for the study were collected from 71 NCC cadets using a structured questionnaire. The collected data were coded, entered into the Statistical Package for the Social Sciences (SPSS) version 22, and analyzed using descriptive statistical techniques.

The findings are presented through frequency distributions, percentages, pie charts, and cross-tabulations to provide a comprehensive understanding of the respondents and the variables under study. The analysis is organized according to the research objectives, enabling a systematic interpretation of the preparedness of NCC cadets in disaster management.

This chapter is divided into three major sections. The first section presents the demographic profile of the respondents. The second section analyses the respondent's level of disaster preparedness in terms of knowledge, attitude, and skills, along with the influence of NCC training, involvement in recent disaster events, and the perceived gap between NCC training and community disaster management needs. The final section discusses the findings objective-wise in relation to the research objectives.

4.2 DEMOGRAPHIC PROFILE OF THE RESPONDENTS

Table 4.2.1: Demographic Profile of the Respondents

Demographic details	Category	Frequency	Percentage
Gender	Male	5	7.0
	Female	66	93.0
Year of Study	First	3	4.2
	Second	27	38.0
	Third	40	56.3
	School	1	1.4
NCC Wing	Army	58	81.7
	Navy	13	18.3
Duration of NCC experience	1-2 years	24	33.8
	More than 2 years	47	66.2
Participation in disaster activity	Yes	54	76.1
	No	17	23.9

Table 4.2.1 presents the demographic profile of the respondents. Out of the total 71 NCC cadets surveyed, the majority were females (93.0%), while males constituted only 7.0% of the sample. Regarding the year of study, more than half of the respondents (56.3%) were third-year students, followed by second-year students (38.0%). First-year students accounted for 4.2%, while only 1.4% were school-level cadets.

With respect to NCC wing affiliation, a large majority of the respondents belonged to the Army Wing (81.7%), whereas 18.3% were from the Navy Wing. In terms of NCC experience, most respondents (66.2%) had more than two years of NCC experience, while 33.8% had between one and two years of experience.

The findings further reveal that a substantial proportion of respondents (76.1%) had participated in disaster-related activities, while 23.9% had no such experience. This suggests that most cadets had some level of practical exposure to disaster management activities, which may influence their preparedness levels regarding disaster management.

4.3 OBJECTIVE-WISE ANALYSIS AND DISCUSSION

The collected data were analyzed according to the specific objectives of the study. Each objective is presented separately with the relevant tables, charts, interpretations, and discussions.

Objective 1: To understand the current level of disaster preparedness (knowledge, attitude, and skills) among NCC cadets.

Fig 4.3.1.1: Knowledge level of NCC cadets on disaster management

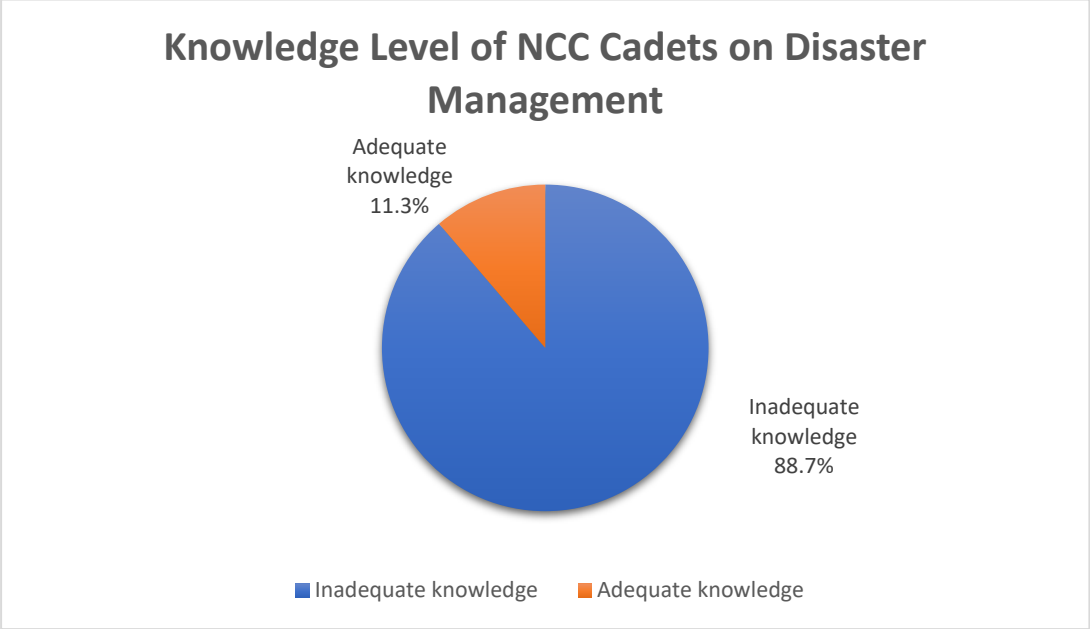

Fig 4.3.1.1 illustrates the knowledge level of NCC cadets regarding disaster management. The findings reveal that a substantial majority of the respondents (88.7%) fall under the category of inadequate knowledge, while only 11.3% of the respondents possess adequate knowledge.

This indicates that despite being members of the National Cadet Corps and potentially participating in disaster-related activities, most cadets do not demonstrate a satisfactory level of disaster management knowledge. The low proportion of respondents with adequate knowledge suggests the existence of gaps in disaster-related awareness, understanding of disaster risks, emergency procedures, and disaster response protocols.

The findings highlight the need for strengthening disaster management education and training within NCC programmes.

Table 4.3.1.2: Cross-tabulation of demographic variables with knowledge level

Demographic details		Level of knowledge		
		Adequate knowledge	Inadequate knowledge	Total
Gender	Male	12.5%	6.3%	7.0%
	Count	1	4	5
	Female	87.5%	93.7%	93.0%
	Count	7	59	66
Year of study	First	12.5%	3.2%	4.2%
	Count	1	2	3
	Second	37.5%	38.1%	38.0%
	Count	3	24	27
	Third	50.0%	57.1%	56.3%
	Count	4	36	40
	School	0.0%	1.6%	1.4%
	Count	0	1	1
NCC wing	Army	87.5%	81.0%	81.7%
	Count	7	51	58
	Navy	12.5%	19.0%	18.3%
	Count	1	12	13
Duration of NCC experience	1-2 years	25.0%	34.9%	33.8%
	Count	2	22	24
	More than 2 years	75.0%	65.1%	66.2%
	Count	6	41	47
Participation in disaster related activity	Participated	75.0%	76.2%	76.1%
	Count	6	48	54
	Not participated	25.0%	23.8%	23.9%
	Count	2	15	17

Table 4.3.1.2 presents the distribution of respondents' knowledge levels across selected demographic characteristics. Among the respondents who demonstrated adequate knowledge regarding disaster management, 87.5% were female and 12.5% were male. Similarly, among those with inadequate knowledge, 93.7% were female and 6.3% were male. This distribution reflects the predominance of female respondents in the study sample.

With respect to the year of study, half (50.0%) of the respondents with adequate knowledge were third-year students, followed by second-year students (37.5%) and first-year students (12.5%). Among respondents with inadequate knowledge, the majority were also third-year students (57.1%), followed by second-year students (38.1%), first-year students (3.2%), and school-level cadets (1.6%). This suggests that although third-year students constituted the largest proportion of respondents with adequate knowledge, a substantial number of them also exhibited inadequate knowledge.

Regarding NCC wing, 87.5% of respondents with adequate knowledge belonged to the Army Wing, while 12.5% belonged to the Navy Wing. Similarly, among respondents with inadequate knowledge, 81.0% were from the Army Wing and 19.0% were from the Navy Wing. This pattern largely reflects the higher representation of Army Wing cadets in the sample.

Analysis of NCC experience indicates that 75.0% of respondents with adequate knowledge had more than two years of NCC experience, whereas 25.0% had one to two years of experience. Among those with inadequate knowledge, 65.1% had more than two years of experience and 34.9% had one to two years of experience. The findings suggest that respondents with longer NCC experience were more likely to possess adequate knowledge compared to those with shorter periods of involvement.

In terms of participation in disaster-related activities, 75.0% of respondents with adequate knowledge had participated in such activities, while 25.0% had not. Among respondents with inadequate knowledge, 76.2% had participated in disaster-related activities and 23.8% had not. Although participation rates were high in both groups, participation alone did not appear to guarantee adequate disaster management knowledge.

The findings indicate that adequate disaster management knowledge was more common among respondents with longer NCC experience and among those who had participated in disaster-related activities. However, the predominance of inadequate knowledge across most demographic categories suggests that additional efforts may be required to strengthen disaster management education and preparedness training among NCC cadets.

Fig 4.3.1.2: Attitude Level of NCC Cadets towards Disaster Preparedness

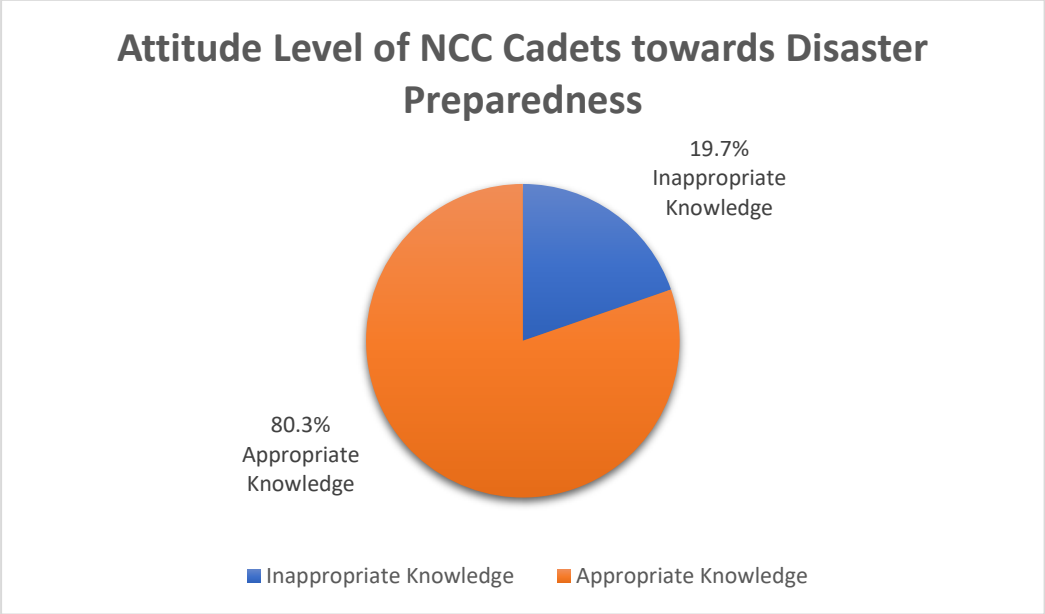

Fig 4.3.1.2 illustrates the attitude level of NCC cadets towards disaster management and disaster preparedness. The findings indicate that a majority of the respondents (80.3%) possess an appropriate attitude, whereas only 19.7% exhibit an inappropriate attitude.

This suggests that most NCC cadets have a positive outlook towards disaster preparedness, community service, and participation in disaster management activities. The high proportion of respondents with an appropriate attitude reflects their willingness to contribute to disaster risk reduction and emergency response efforts. Such positive attitudes are important because they influence motivation, commitment, and active participation during disaster situations.

However, the presence of 19.7% of respondents with an inappropriate attitude indicates that a section of the cadets may require additional awareness programmes, motivation,

and training interventions to strengthen their perception and commitment towards disaster management responsibilities. The findings suggest that although the majority of cadets possess a positive attitude towards disaster preparedness and response, further efforts are needed to improve attitudes among the remaining respondents.

Table 4.3.1.3: Cross-tabulation of demographic variables with attitude level

Demographic details		Level of Attitude		
		Inappropriate Attitude	Appropriate Attitude	Total
Gender	Male	7.1%	7.0%	7.0%
	Count	1	4	5
	Female	92.9%	93.0%	93.0%
	Count	13	53	66
Year of study	First	7.1%	3.5%	4.2%
	Count	1	2	3
	Second	57.1%	33.3%	38.0%
	Count	8	19	27
	Third	35.7%	61.4%	56.3%
	Count	5	35	40
	School	0.0%	1.8%	1.4%
	Count	0	1	1
NCC wing	Army	71.4%	84.2%	81.7%
	Count	10	48	58
	Navy	28.6%	15.8%	18.3%
	Count	4	9	13
Duration of NCC experience	1-2 years	42.9%	31.6%	33.8%
	Count	6	18	24
	More than 2 years	57.1%	68.4%	66.2%
	Count	8	39	47
	Participated	57.1%	80.7%	76.1%
	Count	8	46	54

Participation in disaster related activity	Not participated	42.9%	19.3%	23.9%
	Count	6	11	17

Table 4.3.1.3 presents the association between selected demographic characteristics and the attitude levels of NCC cadets towards disaster management.

With regard to gender, females constituted the majority of respondents in both attitude categories. Among respondents with an inappropriate attitude, 92.9% were female and 7.1% were male. Similarly, among those with an appropriate attitude, 93.0% were female and 7.0% were male. This pattern reflects the predominance of female respondents in the study sample.

Analysis based on year of study shows that among respondents with an inappropriate attitude, the majority were second-year students (57.1%), followed by third-year students (35.7%) and first-year students (7.1%). In contrast, among respondents with an appropriate attitude, most were third-year students (61.4%), followed by second-year students (33.3%), first-year students (3.5%), and school-level cadets (1.8%). This suggests that third-year students were more likely to exhibit a positive attitude towards disaster management.

Regarding NCC wing, 71.4% of respondents with an inappropriate attitude belonged to the Army Wing, while 28.6% belonged to the Navy Wing. Among those with an appropriate attitude, 84.2% were from the Army Wing and 15.8% were from the Navy Wing. The higher proportion of cadets with an appropriate attitude in the Army Wing may be attributed to their greater representation in the sample.

With respect to NCC experience, 57.1% of respondents with an inappropriate attitude and 68.4% of those with an appropriate attitude had more than two years of NCC experience. This indicates that longer involvement in NCC may contribute to the development of a more positive attitude towards disaster management.

Participation in disaster-related activities also showed a notable pattern. Among respondents with an appropriate attitude, 80.7% had participated in disaster-related activities, whereas only 19.3% had not. In comparison, among respondents with an inappropriate attitude, 57.1% had participated and 42.9% had not participated in such

activities. This suggests that exposure to disaster-related activities may positively influence cadet's attitudes towards disaster preparedness and response.

Fig 4.3.1.3: First Aid Training Received Through NCC

Fig 4.3.1.3 illustrates the distribution of NCC cadets based on whether they have received first aid training through NCC. The findings reveal that a vast majority of the respondents (90%) reported having received first aid training through NCC, while only 10% indicated that they had not received such training.

This suggests that first aid training is a widely implemented component of NCC training programmes and that most cadets have been exposed to basic emergency care and response procedures. The high percentage of trained cadets reflects NCC's emphasis on developing practical disaster management skills and enhancing the preparedness of cadets for emergency situations.

However, the fact that 10% of respondents have not received first aid training indicates the need to ensure uniform training opportunities for all cadets. Providing comprehensive first aid training to every cadet can further strengthen their capacity to respond effectively during disasters and emergencies.

Fig 4.3.1.4: Participation Of NCC Cadets In Disaster Mock Drills

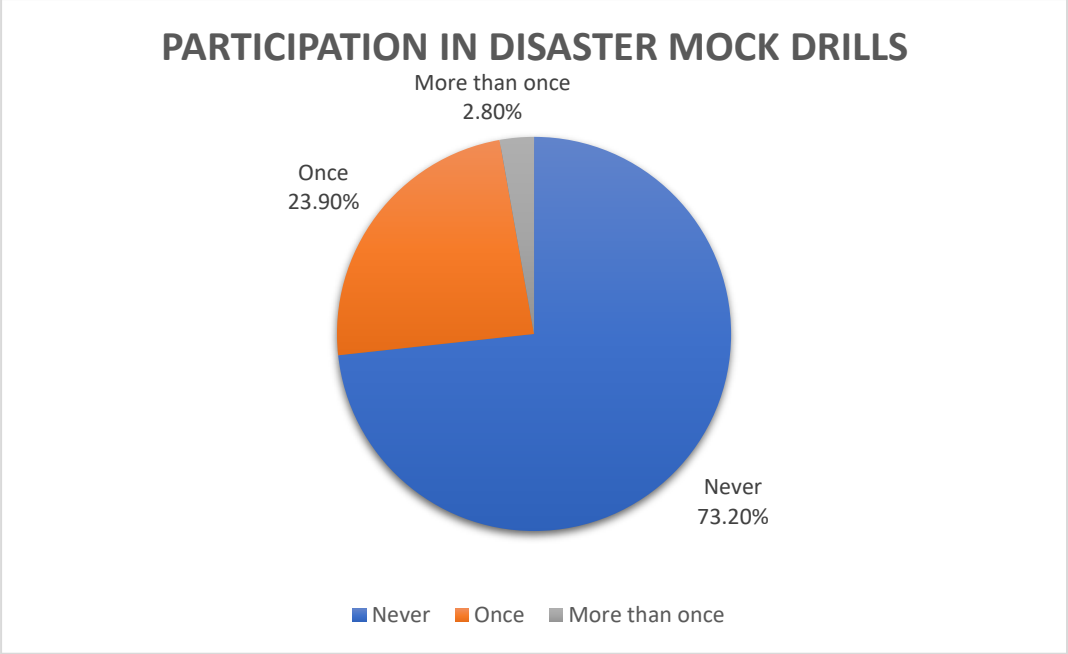

Fig 4.3.1.4 illustrates the participation of NCC cadets in disaster mock drills. The findings reveal that a large majority of the respondents (73.2%) have never participated in a disaster mock drill. Meanwhile, 23.9% of the respondents reported participating once, and only 2.8% indicated that they had participated more than once.

These findings suggest that although NCC cadets may receive theoretical instruction and training related to disaster management, opportunities for practical exposure through mock drills are relatively limited. Disaster mock drills play a crucial role in enhancing preparedness by allowing individuals to practice emergency procedures, improve coordination, and develop confidence in responding to disaster situations. The low level of participation in mock drills may therefore affect the practical preparedness and response capabilities of cadets.

The results highlight the need for increased organization and participation in disaster mock drills as part of NCC training programmes. Providing regular simulation exercises can strengthen practical disaster management competencies and improve the overall preparedness of NCC cadets.

Fig 4.3.1.5: Skills And Practical Preparedness of NCC Cadets In Disaster Management

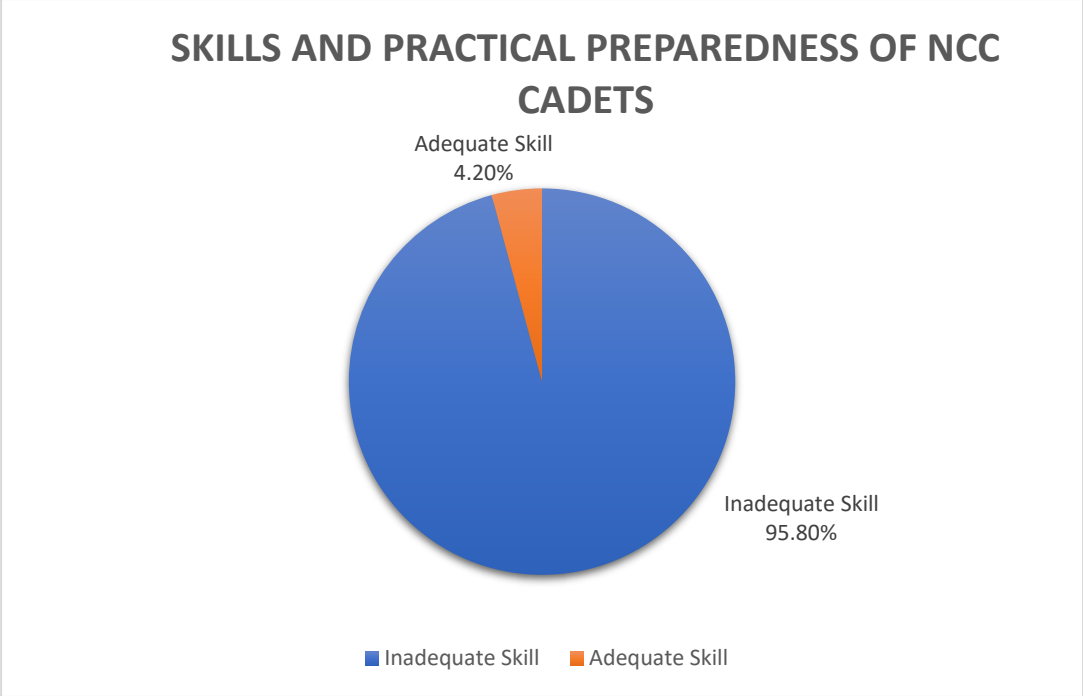

Fig 4.3.1.5 illustrates the overall skills and practical preparedness of NCC cadets in disaster management. The findings reveal that a vast majority of the respondents (95.8%) fall under the category of inadequate skills and practical preparedness, while only 4.2% demonstrate adequate skills and practical preparedness.

This indicates that although NCC cadets may possess awareness and positive attitudes towards disaster management, their practical readiness to respond effectively during disaster situations remains limited. Skills such as first aid, search and rescue, emergency communication, leadership, teamwork, and participation in mock drills are essential components of practical preparedness. The low proportion of respondents with adequate skills suggests that cadets may require greater hands-on training and field-based exposure to effectively apply disaster management concepts in real-life situations.

The findings highlight the need for strengthening practical training components within NCC programmes through regular disaster simulations, mock drills, rescue exercises, and community-based disaster management activities. Enhancing these practical competencies can improve the overall preparedness of NCC cadets and enable them to contribute more effectively during disaster situations.

Table 4.3.1.4: Cross-tabulation of demographic variables with skill level

Demographic details		SKILL LEVEL		
		Inadequate Skill	Adequate Skill	Total
Gender	Male	7.4%	0.0%	7.0%
	Count	5	0	5
	Female	92.6%	100.0%	93.0%
	Count	63	3	66
Year of study	First	4.4%	0.0%	4.2%
	Count	3	0	3
	Second	36.8%	66.7%	38.0%
	Count	25	2	27
	Third	57.4%	33.3%	56.3%
	Count	39	1	40
	School	1.5%	0.0%	1.4%
	Count	1	0	1
NCC wing	Army	82.4%	66.7%	81.7%
	Count	56	2	58
	Navy	17.6%	33.3%	18.3%
	Count	12	1	13
Duration of NCC experience	1-2 years	32.4%	66.7%	33.8%
	Count	22	2	24
	More than 2 years	67.6%	33.3%	66.2%
	Count	46	1	47
Participation in disaster related activity	Participated	76.5%	66.7%	76.1%
	Count	52	2	54
	Not participated	23.5%	33.3%	23.9%
	Count	16	1	17

Table 4.3.1.4 presents the association between selected demographic characteristics and the skill levels of NCC cadets in disaster management.

With respect to gender, all respondents (100.0%) who demonstrated adequate skills were female, while none of the male respondents fell into the adequate skill category. Among respondents with inadequate skills, 92.6% were female and 7.4% were male. This distribution reflects the predominance of female respondents in the study sample.

Regarding the year of study, the majority of respondents with inadequate skills were third-year students (57.4%), followed by second-year students (36.8%), first-year students (4.4%), and school-level cadets (1.5%). Among respondents with adequate skills, 66.7% were second-year students, while 33.3% were third-year students. None of the first-year or school-level cadets demonstrated adequate skills.

With regard to the NCC wing, 82.4% of respondents with inadequate skills belonged to the Army Wing, while 17.6% were from the Navy Wing. Among respondents with adequate skills, 66.7% belonged to the Army Wing and 33.3% belonged to the Navy Wing. This distribution largely reflects the greater representation of Army Wing cadets in the study.

Analysis based on the duration of NCC experience shows that 67.6% of respondents with inadequate skills had more than two years of NCC experience, while 32.4% had one to two years of experience. However, among respondents with adequate skills, 66.7% had one to two years of NCC experience, whereas 33.3% had more than two years of experience. This indicates that a longer duration of NCC experience alone did not necessarily correspond to better disaster management skills.

Regarding participation in disaster-related activities, 76.5% of respondents with inadequate skills had participated in disaster-related activities, while 23.5% had not participated. Similarly, among respondents with adequate skills, 66.7% had participated in disaster-related activities and 33.3% had not. Although most respondents had previous disaster-related experience, the majority still demonstrated inadequate disaster management skills, suggesting that participation alone may not be sufficient to develop practical competencies.

The analysis revealed that while most respondents demonstrated a positive attitude towards disaster preparedness, the majority possessed inadequate disaster management

knowledge and practical skills. Although a high proportion of cadets had received first aid training, participation in mock drills remained low, indicating limited practical exposure. Cross-tabulation further showed variations in preparedness across different demographic characteristics, particularly with respect to year of study, NCC experience, and disaster-related participation.

Objective 2: To understand the influence of NCC training modules in preparing cadets for disaster risk reduction.

Fig 4.3.2.1: Influence level of NCC training in preparing cadets for disaster management among the respondents.

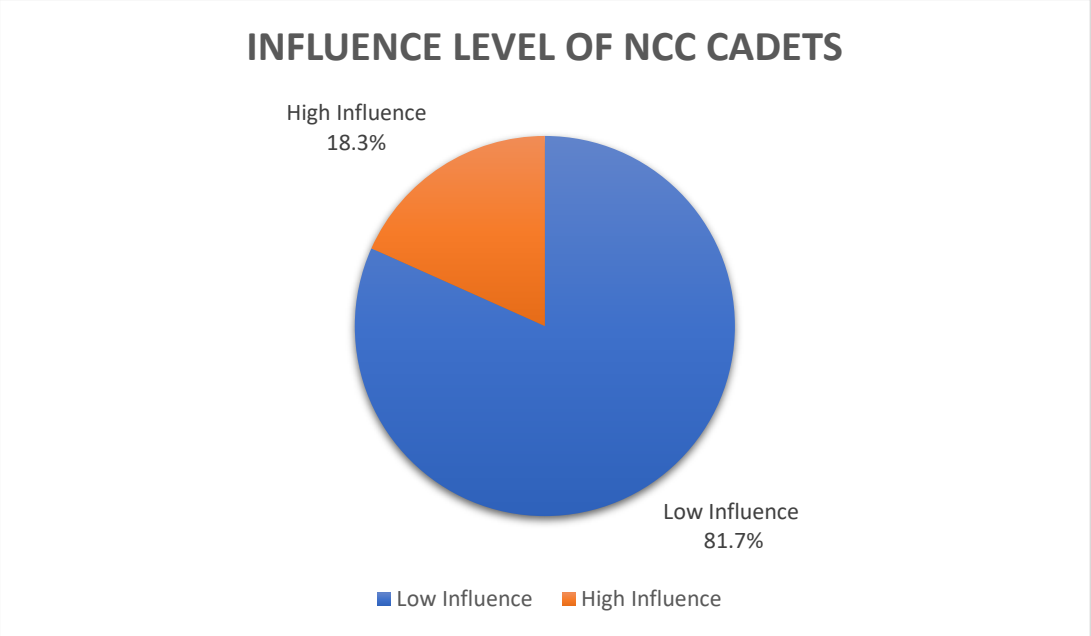

Fig 4.3.2.1 presents the distribution of the influence level of NCC training in preparing cadets for disaster management among the respondents.

The findings indicate that 81.7% of the respondents reported a low level of influence, while only 18.3% of the respondents reported a high level of influence. This suggests that the majority of NCC cadets perceive that the current NCC training has a limited influence on enhancing their disaster management preparedness.

The high percentage of respondents in the low influence category may indicate that the existing NCC training modules provide only basic exposure to disaster management

and may not offer sufficient practical experience, specialized training, or opportunities to actively participate in disaster risk reduction activities. On the other hand, the 18.3% of respondents who reported a high level of influence may have gained additional experience through participation in disaster response activities, camps, or specialized NCC training programmes.

Overall, the results reveal that the influence of NCC training on disaster preparedness is generally low among the majority of the cadets. This highlights the need to strengthen disaster management components within NCC training by increasing practical exercises, simulation drills, community-based disaster preparedness programmes, and collaboration with disaster management agencies. Such measures could improve the effectiveness of NCC training in preparing cadets to respond confidently and competently during disasters.

Table 4.3.2.1: Cross-tabulation of demographic variables with influence level

Demographic details		INFLUENCE LEVEL		
		Low Influence	High Influence	Total
Gender	Male	8.6%	0.0%	7.0%
	Count	5	0	5
	Female	91.4%	100.0%	93.0%
	Count	53	13	66
Year of study	First	5.2%	0.0%	4.2%
	Count	3	0	3
	Second	41.4%	23.1%	38.0%
	Count	24	3	27
	Third	51.7%	76.9%	56.3%
	Count	30	10	40
	School	1.7%	0.0%	1.4%
	Count	1	0	1
NCC wing	Army	77.6%	100.0%	81.7%
	Count	45	13	58
	Navy	22.4%	0.0%	18.3%

	Count	13	0	13
Duration of NCC experience	1-2 years	36.2%	23.1%	33.8%
	Count	21	3	24
	More than 2 years	63.8%	76.9%	66.2%
	Count	37	10	47
Participation in disaster related activity	Participated	77.6%	69.2%	76.1%
	Count	45	9	54
	Not participated	22.4%	30.8%	23.9%
	Count	13	4	17

Table 4.3.2.1 presents the association between demographic characteristics of the respondents and the influence level of NCC training.

Among the respondents with a low influence level, 91.4% (53) were females and 8.6% (5) were males. In the high influence category, 100% (13) were females, while no male respondents were found. Overall, females constituted 93.0% (66) of the sample and males 7.0% (5). This indicates that female cadets formed the majority of the respondents and all cadets reporting a high influence of NCC training were female.

Among respondents with a low influence level, 51.7% (30) were third-year students, followed by 41.4% (24) second-year students, 5.2% (3) first-year students, and 1.7% (1) school-level cadets. In the high influence category, 76.9% (10) were third-year students and 23.1% (3) were second-year students, while no first-year or school cadets reported high influence. Overall, 56.3% (40) of respondents were third-year students, 38.0% (27) were second-year students, 4.2% (3) were first-year students, and 1.4% (1) were school-level cadets. This suggests that higher-year cadets, particularly third-year students, perceived greater influence from NCC training.

Among respondents with a low influence level, 77.6% (45) belonged to the Army Wing and 22.4% (13) to the Navy Wing. In the high influence category, 100% (13) belonged to the Army Wing, while none were from the Navy Wing. Overall, 81.7% (58) of respondents were from the Army Wing and 18.3% (13) from the Navy Wing. This

indicates that Army Wing cadets were more likely to report a high influence of NCC training.

Among respondents with a low influence level, 63.8% (37) had more than two years of NCC experience, while 36.2% (21) had 1–2 years of experience. In the high influence category, 76.9% (10) had more than two years of experience and 23.1% (3) had 1–2 years of experience. Overall, 66.2% (47) of respondents had more than two years of NCC experience, while 33.8% (24) had 1–2 years of experience. This suggests that longer NCC experience is associated with a greater perceived influence of NCC training.

Among respondents with a low influence level, 77.6% (45) had participated in disaster-related activities, while 22.4% (13) had not. In the high influence category, 69.2% (9) had participated and 30.8% (4) had not participated. Overall, 76.1% (54) of respondents had participated in disaster-related activities, whereas 23.9% (17) had not. This indicates that most respondents had prior disaster-related experience, regardless of their perceived influence level.

The crosstab shows that respondents reporting a high influence of NCC training were predominantly female, third-year Army Wing cadets with more than two years of NCC experience. Additionally, a majority of both low- and high-influence respondents had participated in disaster-related activities. These findings suggest that greater training exposure through seniority and longer NCC experience may enhance the perceived influence of NCC training on disaster preparedness.

The findings indicate that the majority of respondents perceived that NCC training had only a low influence on their disaster preparedness. Cadets with longer NCC experience, particularly third-year Army Wing cadets, reported relatively higher perceived influence compared to others. The results suggest that while NCC training provides basic disaster management exposure, there is a need for more practical and community-oriented learning experiences.

Objective 3: To understand the roles played by NCC cadets in recent disaster events.

This section examines the extent to which NCC cadets have actively participated in disaster response and relief activities.

Fig 4.3.3.1: Involvement Level of NCC Cadets In Recent Disaster Events.

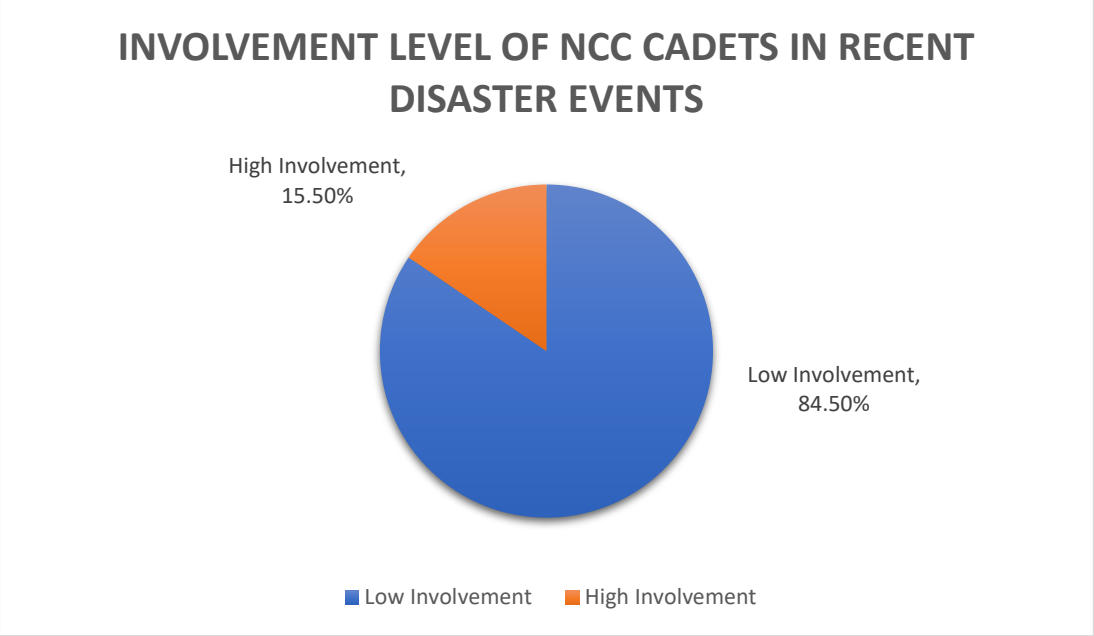

Fig 4.3.3.1 shows the involvement level of NCC cadets in recent disaster events. Out of the total respondents, 84.5% of the NCC cadets reported a low level of involvement, while only 15.5% reported a high level of involvement.

This indicates that the majority of NCC cadets have had limited participation in recent disaster response activities. The low level of involvement may be due to fewer opportunities for deployment, limited engagement in actual disaster situations, or insufficient coordination with disaster management agencies. The findings suggest that although NCC cadets receive disaster-related training, their practical involvement in real disaster events remains relatively low. This highlights the need to create more opportunities for cadets to actively participate in community-based disaster preparedness and response activities, thereby strengthening their practical experience and contribution to disaster management.

Table 4.3.3.1: Cross-tabulation of demographic variables with involvement level

Demographic details		INVOLVEMENT LEVEL		
		Low Involvement	High Involvement	Total
Gender	Male	8.3%	0.0%	7.0%
	Count	5	0	5
	Female	91.7%	100.0%	93.0%
	Count	55	11	66
Year of study	First	5.0%	0.0%	4.2%
	Count	3	0	3
	Second	38.3%	36.4%	38.0%
	Count	23	4	27
	Third	55.0%	63.6%	56.3%
	Count	33	7	40
	School	1.7%	0.0%	1.4%
	Count	1	0	1
NCC wing	Army	80.0%	90.9%	81.7%
	Count	48	10	58
	Navy	20.0%	9.1%	18.3%
	Count	12	1	13
Duration of NCC experience	1-2 years	31.7%	45.5%	33.8%
	Count	19	5	24
	More than 2 years	68.3%	54.5%	66.2%
	Count	41	6	47
Participation in disaster related activity	Participated	80.0%	54.5%	76.1%
	Count	48	6	54
	Not participated	20.0%	45.5%	23.9%
	Count	12	5	17

Table 4.3.3.1 examines the relationship between the demographic characteristics of NCC cadets and their level of involvement in recent disaster events. The findings

indicate that 84.5% of the respondents had a low level of involvement, while 15.5% reported a high level of involvement.

With regard to gender, female cadets constituted the majority of the respondents in both involvement categories. All cadets with high involvement (100%) were female, whereas none of the male respondents reported high involvement. This may be attributed to the larger proportion of female respondents in the study.

In terms of the year of study, third-year cadets accounted for the highest proportion of both low involvement (55%) and high involvement (63.6%), followed by second-year cadets. No first-year or school cadets were found in the high involvement category. This suggests that senior cadets may have greater opportunities and experience to participate in disaster-related activities.

Regarding the NCC wing, Army Wing cadets represented the majority of respondents in both involvement groups. Among those with high involvement, 90.9% belonged to the Army Wing, while only 9.1% were from the Navy Wing. This indicates that Army Wing cadets were more actively involved in recent disaster events.

The duration of NCC experience also showed some variation. Among cadets with high involvement, 54.5% had more than two years of NCC experience, while 45.5% had one to two years of experience. This suggests that longer NCC experience may contribute to greater participation in disaster response activities.

With respect to participation in disaster-related activities, 54.5% of the highly involved cadets had previously participated in disaster-related activities, while 45.5% had not. In contrast, 80% of the cadets with low involvement had participated in such activities. This indicates that previous participation alone does not necessarily translate into a higher level of involvement in recent disaster events.

Overall, the findings suggest that high involvement in recent disaster events was more commonly observed among female cadets, third-year students, Army Wing cadets, and those with longer NCC experience. However, the overall level of involvement remained low for the majority of respondents, indicating that factors beyond demographic characteristics, such as opportunities for deployment and institutional engagement, may influence the actual involvement of NCC cadets in disaster events. The findings reveal that most respondents reported a low level of involvement in recent disaster events.

Greater involvement was observed among senior cadets, Army Wing cadets, and those with longer NCC experience. However, the overall level of operational participation remained limited, suggesting that opportunities for real disaster deployment are relatively few.

Objective 4: To identify the gap between NCC training and community disaster management needs.

This objective explores respondent's perceptions regarding the adequacy of existing NCC disaster management training in meeting actual community disaster management requirements.

Fig 4.3.4.1: Gap Between NCC Disaster Training and Actual Community Disaster Management Needs Among the Respondents.

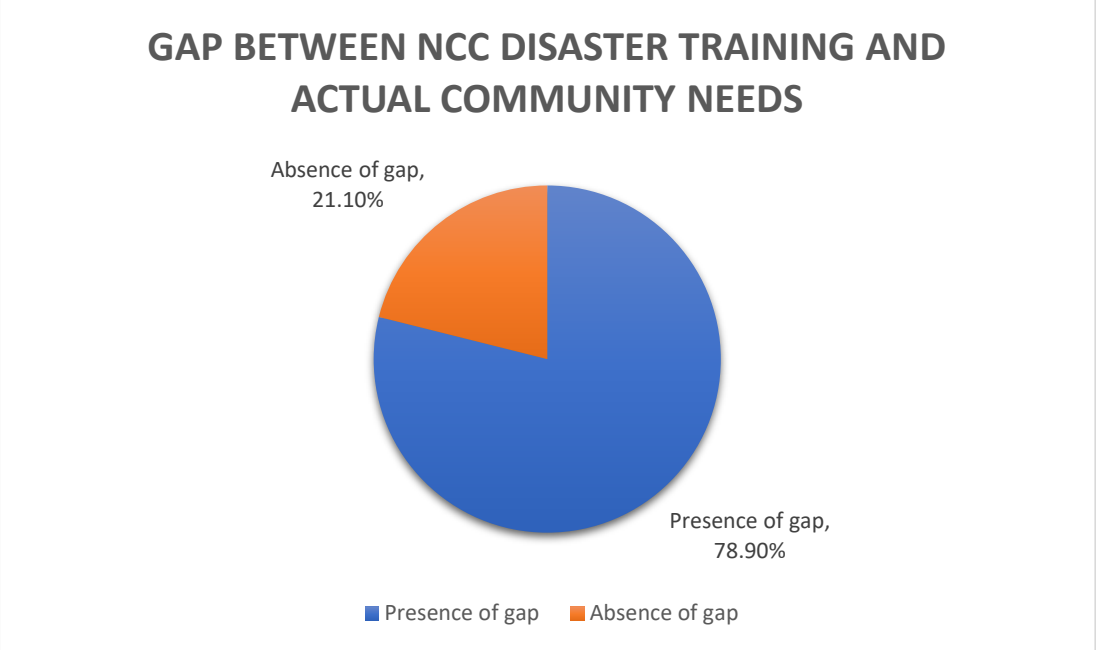

Fig 4.3.4.1 illustrates the perceived gap between NCC disaster training and actual community disaster management needs among the respondents.

The findings reveal that 78.9% of the respondents perceived a presence of a gap, while only 21.1% reported an absence of a gap. This indicates that the majority of NCC cadets

believe that there is a mismatch between the disaster management training provided through NCC and the practical requirements of communities during disaster situations.

The findings suggest the need to strengthen the NCC training curriculum by incorporating more practical, community-oriented, and field-based disaster management activities to better equip cadets for real-life disaster response.

Table 4.3.4.1: Cross-tabulation of demographic variables with perceived gap

Demographic details		GAP LEVEL		
		Presence of gap	Absence of gap	Total
Gender	Male	7.1%	6.7%	7.0%
	Count	4	1	5
	Female	92.9%	93.3%	93.0%
	Count	52	14	66
Year of study	First	5.4%	0.0%	4.2%
	Count	3	0	3
	Second	32.1%	60.0%	38.0%
	Count	18	9	27
	Third	60.7%	40.0%	56.3%
	Count	34	6	40
	School	1.8%	0.0%	1.4%
	Count	1	0	1
NCC wing	Army	82.1%	80.0%	81.7%
	Count	46	12	58
	Navy	17.9%	20.0%	18.3%
	Count	10	3	13
Duration of NCC experience	1-2 years	25.0%	66.7%	33.8%
	Count	14	10	24
	More than 2 years	75.0%	33.3%	66.2%
	Count	42	5	47

Participation in disaster related activity	Participated	82.1%	53.3%	76.1%
	Count	46	8	54
	Not participated	17.9%	46.7%	23.9%
	Count	10	7	17

Table 4.3.4.1 presents the relationship between the demographic characteristics of the respondents and the gap level between NCC disaster management training and actual community disaster management needs.

The table shows that among respondents who perceived a presence of gap, 92.9% (52) were female and 7.1% (4) were male. Similarly, among those who perceived an absence of gap, 93.3% (14) were female and 6.7% (1) were male. This indicates that female cadets formed the majority of the respondents irrespective of their perception of the gap between NCC training and community disaster management needs.

Among respondents who perceived a presence of gap, the majority were third-year students (60.7%, 34), followed by second-year students (32.1%, 18), first-year students (5.4%, 3), and school cadets (1.8%, 1). In contrast, among those who perceived an absence of gap, the majority were second-year students (60.0%, 9), followed by third-year students (40.0%, 6), while no first-year or school cadets were found in this category. This suggests that third-year students were more likely to perceive a gap than second-year students.

The findings reveal that 82.1% (46) of respondents who perceived a presence of gap belonged to the Army Wing, while 17.9% (10) belonged to the Navy Wing. Similarly, among respondents who perceived an absence of gap, 80.0% (12) were from the Army Wing and 20.0% (3) were from the Navy Wing. This indicates that the majority of respondents in both categories were Army Wing cadets.

Among respondents who perceived a presence of gap, 75.0% (42) had more than two years of NCC experience, while 25.0% (14) had 1–2 years of experience. On the other hand, among those who perceived an absence of gap, 66.7% (10) had 1–2 years of experience and 33.3% (5) had more than two years of experience. This indicates that

cadets with longer NCC experience were more likely to identify gaps between NCC training and community disaster management needs.

The table shows that 82.1% (46) of respondents who perceived a presence of gap had participated in disaster-related activities, while 17.9% (10) had not participated. Among respondents who perceived an absence of gap, 53.3% (8) had participated in disaster-related activities and 46.7% (7) had not. This suggests that cadets with prior disaster-related experience were more likely to perceive gaps between NCC training and actual community disaster management needs.

The findings indicate that a majority of respondents perceived a clear gap between the disaster management training provided through NCC and the practical needs of communities during disasters. Cadets with greater NCC experience and previous disaster participation were more likely to identify this gap, emphasizing the need for improved practical training, field exposure, and stronger coordination with disaster management agencies.

CHAPTER V
FINDINGS, SUGGESTIONS AND CONCLUSION

FINDINGS, SUGGESTIONS AND CONCLUSIONS

5.1 INTRODUCTION

The primary purpose of any research is not only to collect and analyze data but also to derive meaningful findings that address the research objectives and contribute to the existing body of knowledge. This chapter presents the major findings of the study based on the analysis of data collected from 71 National Cadet Corps (NCC) cadets regarding their preparedness in disaster management. The findings are organized according to the four specific objectives of the study and provide an overall understanding of the preparedness of NCC cadets in terms of their knowledge, attitude, skills, influence of NCC training, participation in disaster events, and the perceived gaps between NCC training and community disaster management needs.

The discussion of findings highlights the major trends and patterns that emerged from the analysis and explains their significance in the context of disaster preparedness among youth volunteers. Based on these findings, practical suggestions are proposed to strengthen NCC disaster management training, improve the preparedness of cadets, and enhance their contribution to disaster risk reduction and community resilience. Finally, the chapter concludes by summarizing the overall findings and discussing their implications for NCC, educational institutions, disaster management authorities, and future research.

5.2 FINDINGS AND DISCUSSION

The findings of the present study are discussed in accordance with the four specific objectives of the research. The discussion integrates the empirical findings with existing literature and the theoretical framework adopted for the study, namely Kolb's Experiential Learning Theory (1984). This approach facilitates a comprehensive understanding of the preparedness of NCC cadets in disaster management and highlights the extent to which experiential learning through NCC training contributes to disaster preparedness, participation in disaster response, and community resilience.

The present study assessed the current level of disaster preparedness among NCC cadets by examining their knowledge, attitudes, and practical skills related to disaster management. The analysis also considered the influence of demographic characteristics such as gender, year of study, NCC wing, duration of NCC experience, and participation in disaster-related activities on these dimensions of preparedness.

The demographic profile of the respondents revealed that out of the total sample of 71 NCC cadets, the majority (93.0%) were female, while only 7.0% were male. More than half of the respondents (56.3%) were third-year students, followed by second-year students (38.0%), whereas first-year students and school-level cadets constituted only a small proportion of the sample. The majority of respondents (81.7%) belonged to the Army Wing, while the remaining 18.3% were from the Navy Wing. In terms of NCC experience, 66.2% had more than two years of NCC experience, and 33.8% had one to two years of experience. Furthermore, 76.1% of the respondents had participated in disaster-related activities, indicating that most cadets had some level of exposure to disaster management activities.

Despite these favorable demographic characteristics, the study found that the overall level of disaster preparedness among the respondents remained unsatisfactory. Analysis of disaster management knowledge revealed that 88.7% of the respondents possessed inadequate knowledge, whereas only 11.3% demonstrated adequate knowledge. This finding indicates that although many cadets had participated in NCC activities and disaster-related programs, they lacked sufficient understanding of disaster concepts, disaster risk reduction, emergency procedures, disaster response protocols, and disaster preparedness measures. The low proportion of respondents with adequate knowledge suggests that the existing disaster management education within NCC may not be sufficient to develop comprehensive theoretical understanding among cadets.

Further analysis of knowledge across demographic characteristics revealed several noteworthy patterns. Female respondents constituted the majority of both adequate and inadequate knowledge categories, reflecting the predominance of female participants in the study. Third-year students represented the highest proportion of respondents with adequate knowledge; however, they also accounted for the largest proportion of respondents with inadequate knowledge because they formed the largest group within the sample. Respondents with more than two years of NCC experience demonstrated

comparatively higher levels of adequate knowledge than those with shorter periods of experience. Similarly, respondents who had participated in disaster-related activities were more likely to possess adequate knowledge than those without such experience. Nevertheless, a large proportion of respondents with disaster-related experience continued to demonstrate inadequate knowledge, indicating that participation alone did not necessarily improve theoretical understanding of disaster management.

The assessment of respondents' attitudes towards disaster management presented a contrasting picture. The findings showed that 80.3% of the respondents possessed an appropriate attitude towards disaster preparedness and disaster response, while only 19.7% demonstrated an inappropriate attitude. This indicates that most NCC cadets have positive perceptions regarding disaster preparedness, recognize the importance of community service, and are willing to participate in disaster management activities. Such positive attitudes are essential because they influence motivation, commitment, teamwork, and willingness to volunteer during emergencies.

The cross-tabulation of attitude with demographic characteristics revealed that third-year students were more likely to demonstrate an appropriate attitude compared to first- and second-year students. Cadets with more than two years of NCC experience also showed relatively better attitudes towards disaster management than those with shorter experience. Likewise, respondents who had previously participated in disaster-related activities were considerably more likely to possess an appropriate attitude than those who had not participated. These findings suggest that prolonged exposure to NCC programs and practical disaster-related experiences contributes positively to the development of favorable attitudes towards disaster preparedness.

The analysis further examined specific indicators of practical preparedness. The findings revealed that 90% of respondents had received first aid training through NCC, indicating that first aid forms an integral component of NCC training activities. Only 10% reported that they had not received any first aid training. This demonstrates that NCC has made considerable efforts to provide basic emergency care training to its cadets.

However, despite the high proportion of respondents receiving first aid training, participation in disaster mock drills remained remarkably low. Nearly three-fourths (73.2%) of the respondents reported that they had never participated in a disaster mock

drill. About 23.9% had participated only once, while merely 2.8% had participated more than once. This finding suggests that although cadets receive basic theoretical and first aid instruction, opportunities to practice these competencies through disaster simulations and mock exercises remain inadequate.

The findings regarding disaster management skills further reinforce this observation. The study revealed that 95.8% of respondents possessed inadequate practical disaster management skills, whereas only 4.2% demonstrated adequate practical skills. This indicates that despite positive attitudes and participation in some disaster-related activities, the majority of cadets were not adequately prepared to perform practical disaster management functions such as search and rescue, emergency communication, evacuation, leadership, teamwork, and disaster response under field conditions.

Cross-tabulation of skill levels with demographic characteristics revealed that all respondents with adequate practical skills were female. Second-year students constituted the majority of respondents demonstrating adequate practical skills, whereas third-year students represented the largest proportion of respondents with inadequate skills. Army Wing cadets constituted the majority in both skill categories, reflecting their higher representation within the study sample. Interestingly, respondents with one to two years of NCC experience formed the majority of those possessing adequate practical skills, suggesting that longer duration of service alone did not necessarily result in improved disaster management competencies. Similarly, although many respondents had previously participated in disaster-related activities, the majority continued to demonstrate inadequate practical skills, indicating that disaster participation without structured practical training may not be sufficient to develop operational competence.

Overall, the findings relating to the first objective indicate that while NCC cadets possess favourable attitudes towards disaster preparedness and many have received basic first aid training and participated in disaster-related activities, their overall preparedness remains limited due to inadequate disaster management knowledge and insufficient practical skills. The findings highlight the need to strengthen competency-based disaster management training within NCC by increasing opportunities for experiential learning, disaster simulations, search and rescue exercises, and community-based disaster preparedness programs.

The findings of the present study reveal a significant disparity between the attitudes of NCC cadets and their actual preparedness in terms of disaster management knowledge and practical skills. While the majority of respondents demonstrated a positive attitude towards disaster preparedness, most lacked adequate knowledge and operational competencies required for effective disaster response. This finding suggests that willingness to participate in disaster management does not necessarily translate into preparedness unless supported by comprehensive education and practical training.

The predominance of inadequate disaster management knowledge among respondents indicates that the existing NCC curriculum may not sufficiently cover essential aspects of disaster risk reduction, hazard identification, emergency planning, incident response, and community-based disaster preparedness. According to the Sendai Framework for Disaster Risk Reduction 2015–2030, strengthening disaster knowledge is one of the key priorities for reducing disaster risk and enhancing community resilience (United Nations Office for Disaster Risk Reduction (UNDRR, 2015). The present findings therefore suggest that greater emphasis should be placed on strengthening theoretical disaster management education within NCC programs.

The positive attitudes observed among the majority of respondents are consistent with the objectives of the National Cadet Corps, which seeks to develop qualities of discipline, leadership, patriotism, and social responsibility among youth (Directorate General National Cadet Corps, 2024). Positive attitudes are recognized as an important prerequisite for effective disaster volunteerism because they promote willingness to serve communities during emergencies. Similarly, Paton and Johnston (2017) argue that disaster preparedness is influenced not only by knowledge but also by attitudes, motivation, and commitment to community resilience. The present findings indicate that NCC has been successful in fostering these positive behavioral attributes among cadets.

However, the finding that almost all respondents demonstrated inadequate practical disaster management skills raises important concerns regarding the effectiveness of current training approaches. Although most respondents had received first aid training, their limited participation in mock drills and simulation exercises appears to have restricted the development of practical competencies. Disaster preparedness requires repeated practice through realistic training scenarios that enable volunteers to apply

theoretical knowledge under emergency conditions. The International Federation of Red Cross and Red Crescent Societies (2020) emphasizes that competency-based disaster training should combine classroom instruction with simulation exercises, practical demonstrations, and community-based disaster preparedness activities. The absence of such experiential learning opportunities may explain the low skill levels observed among respondents.

The findings also indicate that participation in disaster-related activities and longer NCC experience alone did not consistently result in better disaster preparedness. This suggests that the quality and nature of disaster-related experiences may be more important than the duration of participation. Johnson et al. (2014) reported that disaster education programs are most effective when they include active participation, experiential learning, regular practice, and continuous reinforcement of knowledge and skills. Similarly, Ronan et al. (2015) concluded that repeated practical training significantly improves disaster preparedness outcomes among young people compared to one-time awareness programs.

Another important observation is the limited participation of cadets in disaster mock drills despite widespread first aid training. Mock drills provide opportunities to improve coordination, communication, leadership, decision-making, and teamwork during emergencies. Their absence may reduce the confidence and operational readiness of cadets when responding to real disaster situations. This finding supports the recommendations of the Kerala State Disaster Management Authority (2019), which emphasizes the importance of regular mock drills, preparedness exercises, and community-level disaster simulations to strengthen disaster resilience in hazard-prone regions such as Kerala.

Overall, the findings suggest that while NCC has successfully developed positive attitudes and basic awareness regarding disaster management, greater emphasis should be placed on strengthening theoretical knowledge and practical competencies through competency-based training, simulation exercises, interdisciplinary collaboration, and regular field-based disaster preparedness programs. Such improvements would enable NCC cadets to contribute more effectively to disaster risk reduction, emergency response, and community resilience.

The findings can also be understood through Kolb's Experiential Learning Theory (1984), which proposes that effective learning occurs through a continuous cycle of concrete experience, reflective observation, abstract conceptualization, and active experimentation. Disaster preparedness requires not only theoretical understanding but also repeated opportunities to apply learning in practical situations. Although NCC cadets appear to possess positive attitudes towards disaster management, the low levels of knowledge and practical skills suggest that opportunities for experiential learning may be insufficient. Activities such as mock drills, simulation exercises, search and rescue training, field demonstrations, and community-based disaster preparedness programmes enable learners to transform theoretical knowledge into practical competencies. Therefore, strengthening experiential learning within NCC training can significantly improve disaster preparedness among cadets (Kolb, 1984; IFRC, 2020; Paton & Johnston, 2017).

The second objective of the study was to examine the influence of NCC training modules in preparing cadets for disaster risk reduction and disaster preparedness. The findings indicate that the overall perceived influence of NCC training on disaster preparedness was relatively low among the respondents.

The analysis revealed that 81.7% of the respondents reported a low level of influence of NCC training on their disaster preparedness, while only 18.3% perceived that NCC training had a high influence. This finding suggests that although disaster management is incorporated into NCC activities, the majority of cadets believe that the existing training has not significantly enhanced their preparedness to respond effectively during disaster situations. The results indicate that the current NCC training primarily provides basic awareness regarding disaster management but offers limited opportunities for developing advanced practical competencies required for disaster risk reduction.

Further analysis of the demographic characteristics revealed several notable patterns. With regard to gender, female respondents constituted the majority of both influence categories because they represented the largest proportion of the study sample. Among respondents who reported a high influence of NCC training, all were female cadets, whereas no male respondent perceived a high level of training influence. This finding primarily reflects the demographic composition of the respondents rather than indicating gender-based differences in training effectiveness.

Analysis according to the year of study showed that third-year students accounted for the largest proportion (76.9%) of respondents who perceived a high influence of NCC training, followed by second-year students (23.1%). None of the first-year or school-level cadets reported a high level of influence. These findings indicate that the perceived influence of NCC training tends to increase with academic progression and prolonged participation in NCC activities. Senior cadets are more likely to have attended annual training camps, specialized programmes, leadership camps, and disaster-related activities, thereby increasing their exposure to disaster management concepts and practical experiences.

With respect to NCC wing affiliation, all respondents who perceived a high influence of NCC training belonged to the Army Wing, while none were from the Navy Wing. Although this finding is partly attributable to the larger representation of Army Wing cadets in the sample, it may also indicate that Army Wing cadets receive relatively greater exposure to disaster management activities, field exercises, and emergency response training as part of their regular NCC programme.

The findings further revealed that respondents with more than two years of NCC experience were more likely to perceive a higher influence of NCC training than those with shorter periods of experience. Among respondents reporting high influence, 76.9% had more than two years of NCC experience. This suggests that continued participation in NCC enables cadets to accumulate greater knowledge, confidence, leadership qualities, and disaster-related experience over time.

The analysis also examined previous participation in disaster-related activities. The majority of respondents in both the low-influence and high-influence categories had participated in disaster-related activities. However, the proportion of respondents reporting low influence remained considerably higher despite such participation. This finding suggests that participation in disaster-related activities alone does not necessarily improve perceptions regarding the effectiveness of NCC training. Rather, the quality, frequency, and practical relevance of training activities appear to play a more important role in enhancing disaster preparedness.

Overall, the findings demonstrate that although NCC training contributes to disaster preparedness to some extent, its perceived influence remains limited among the majority of cadets. Higher levels of perceived influence were observed primarily among

senior cadets, Army Wing respondents, and those with longer NCC experience, indicating that prolonged exposure to NCC activities may gradually improve preparedness. Nevertheless, the findings also highlight the need for strengthening practical, competency-based, and community-oriented disaster management training within NCC.

The findings of the present study indicate that the majority of NCC cadets perceived the influence of existing NCC training on disaster preparedness to be relatively low. This suggests that although disaster management forms an important component of NCC activities, the present training modules may not adequately equip cadets with the competencies required for effective disaster risk reduction and emergency response. The findings support the view that disaster preparedness extends beyond theoretical knowledge and requires practical learning experiences that enable individuals to apply disaster management principles in real-life situations.

The Directorate General National Cadet Corps (2024) identifies disaster management as one of the important areas of NCC training and emphasizes the role of cadets in supporting civil authorities during emergencies. NCC training includes components such as first aid, community service, disaster awareness, and participation in relief activities. However, the findings of the present study suggest that these components alone may not be sufficient to develop a high level of disaster preparedness among cadets. Many respondents perceived that the training provided only basic exposure to disaster management and lacked adequate practical orientation.

The finding that third-year cadets and respondents with longer NCC experience reported comparatively higher influence of NCC training is consistent with the cumulative nature of experiential learning. Cadets who remain in NCC for longer periods have greater opportunities to participate in camps, leadership programmes, social service activities, and disaster-related initiatives, thereby increasing their confidence and preparedness. Kolb's Experiential Learning Theory (1984) explains that effective learning occurs through repeated cycles of concrete experience, reflective observation, conceptual understanding, and active experimentation. Therefore, prolonged participation in experiential learning activities is likely to enhance the perceived effectiveness of NCC training.

Despite this, the overall perception of low training influence indicates that the current disaster management curriculum requires further strengthening. According to the Sendai Framework for Disaster Risk Reduction 2015–2030, disaster education should focus not only on awareness but also on developing practical capacities, community engagement, leadership, and resilience through continuous learning and preparedness activities (UNDRR, 2015). Similarly, the International Federation of Red Cross and Red Crescent Societies (2020) emphasizes that disaster preparedness training should combine classroom instruction with simulation exercises, field demonstrations, mock drills, and community-based disaster risk reduction programmes to develop operational competence.

Another important finding is that previous participation in disaster-related activities did not necessarily correspond to higher perceived influence of NCC training. Although many respondents had participated in disaster-related programmes, a large proportion still reported that NCC training had only a limited influence on their preparedness. This suggests that disaster participation alone is insufficient unless accompanied by structured learning objectives, guided reflection, and competency-based evaluation. Johnson et al. (2014) observed that disaster education programmes are more effective when learners actively participate in simulations, repeated practical exercises, and collaborative problem-solving rather than relying solely on theoretical instruction or occasional exposure.

The present findings also indicate that Army Wing cadets reported comparatively greater influence of NCC training than Navy Wing cadets. This may reflect differences in the nature of training activities, field exercises, or disaster management opportunities available across NCC wings. However, because Army Wing cadets constituted the majority of the sample, this finding should be interpreted cautiously and cannot be generalized without further investigation.

Overall, the findings suggest that while NCC training plays an important role in creating awareness regarding disaster management, its influence on overall preparedness remains limited due to insufficient emphasis on practical skill development, disaster simulations, community engagement, and multidisciplinary coordination. Strengthening these aspects of training would enable cadets to develop greater confidence, competence, and operational readiness for disaster response. Integrating

more field-based learning, regular mock drills, specialized disaster management courses, and collaborative training with disaster management agencies would significantly enhance the effectiveness of NCC training programmes and better prepare cadets to contribute to disaster risk reduction and community resilience.

The findings are further supported by Kolb's Experiential Learning Theory, which emphasizes that learning becomes meaningful when learners repeatedly participate in practical experiences and apply their knowledge in real-life situations (Kolb, 1984). Disaster management competencies cannot be developed solely through classroom instruction; rather, they require continuous practice through simulation exercises, mock drills, leadership activities, and community engagement. The relatively low perceived influence of NCC training indicates the need to strengthen experiential components within the existing curriculum. Integrating more practical learning opportunities and structured reflection can improve the effectiveness of NCC training and better prepare cadets for disaster risk reduction and emergency response (Kolb, 1984; UNDRR, 2015; Johnson et al., 2014).

The third objective of the study was to examine the extent to which NCC cadets have participated in recent disaster events and to understand the roles they have played during such situations. The findings reveal that the overall level of involvement of NCC cadets in recent disaster events was relatively low despite their participation in NCC training and disaster-related activities.

The analysis showed that 84.5% of the respondents reported a low level of involvement in recent disaster events, whereas only 15.5% reported a high level of involvement. This indicates that although NCC cadets receive training related to disaster management, only a small proportion have actively participated in disaster response and relief operations. The low level of involvement suggests that opportunities for deployment during actual disasters remain limited, thereby restricting cadets' ability to gain practical field experience.

The demographic analysis provides further insights into the characteristics of respondents with varying levels of involvement. Female cadets constituted the majority of respondents in both involvement categories, reflecting the overall composition of the study sample. All respondents who reported high involvement in recent disaster events were female. This finding primarily reflects the higher representation of female cadets

in the study rather than indicating gender-based differences in disaster response participation.

The analysis based on the year of study revealed that third-year cadets constituted the largest proportion (63.6%) of respondents with high involvement in disaster events, followed by second-year cadets (36.4%). None of the first-year or school-level cadets reported high involvement. This finding suggests that senior cadets are more likely to participate in disaster-related operations due to their longer duration of NCC service, greater training exposure, and increased opportunities to engage in institutional and community-based activities.

Regarding NCC wing affiliation, 90.9% of respondents with high involvement belonged to the Army Wing, while only 9.1% belonged to the Navy Wing. Although the Army Wing accounted for the majority of respondents in the study, this finding also indicates that Army Wing cadets may receive comparatively greater opportunities for participation in disaster response activities and community service programmes.

The duration of NCC experience also appeared to influence involvement levels. Among respondents with high involvement, 54.5% had more than two years of NCC experience, while 45.5% had one to two years of experience. This finding indicates that prolonged participation in NCC contributes to greater confidence, leadership ability, and opportunities to engage in disaster-related activities.

An interesting observation emerged regarding previous participation in disaster-related activities. Among respondents with high involvement, 54.5% had participated in disaster-related activities, while 45.5% had not. Conversely, 80% of respondents with low involvement had also participated in disaster-related activities. This indicates that previous participation alone does not necessarily guarantee greater involvement in recent disaster events. Instead, actual deployment during disasters appears to depend on factors such as institutional decisions, availability of opportunities, disaster occurrence, coordination with government agencies, and local operational requirements.

Overall, the findings demonstrate that while some NCC cadets have participated actively in disaster response activities, the majority have experienced only limited involvement. Greater participation was observed among senior cadets, Army Wing respondents, and those with longer NCC experience. Nevertheless, the overall

operational involvement of NCC cadets remains relatively low, suggesting that there is considerable scope to enhance their engagement in disaster preparedness, response, and community resilience initiatives.

The findings of the present study indicate that the majority of NCC cadets have had limited involvement in recent disaster events despite receiving disaster management training through NCC. This finding suggests that disaster preparedness cannot be fully achieved through classroom instruction and institutional training alone; rather, it requires opportunities to participate actively in real disaster situations where theoretical knowledge and practical skills can be applied.

The National Cadet Corps has historically played an important role in supporting civil authorities during disasters by participating in relief distribution, evacuation, crowd management, rescue assistance, rehabilitation programmes, and public awareness campaigns (Directorate General National Cadet Corps, 2024). During disasters such as the 2018 Kerala floods, Cyclone Fani, Cyclone Amphan, and the COVID-19 pandemic, NCC cadets contributed significantly by assisting local authorities in relief operations, distributing essential supplies, supporting community awareness campaigns, and helping vulnerable populations (National Disaster Management Authority (NDMA, 2019; Kerala State Disaster Management Authority (KSDMA, 2019). However, the findings of the present study suggest that such opportunities have not been uniformly available to all cadets.

The greater involvement of third-year cadets and respondents with longer NCC experience supports the principle of experiential learning, which proposes that repeated participation in practical activities enhances competence, confidence, and leadership. According to Kolb's Experiential Learning Theory (1984), effective learning occurs when individuals actively engage in concrete experiences, reflect on those experiences, and apply the acquired knowledge in future situations. Senior NCC cadets are more likely to have attended annual training camps, leadership camps, disaster preparedness programmes, and community service activities, thereby increasing their opportunities for operational involvement.

The predominance of Army Wing cadets among respondents with higher involvement may reflect the greater emphasis placed on field exercises, discipline, leadership development, and community engagement within Army Wing training activities.

However, because Army Wing cadets constituted a larger proportion of the study sample, this finding should be interpreted with caution and cannot be generalized to all NCC wings.

An important finding of the study is that previous participation in disaster-related activities did not necessarily correspond to greater involvement in recent disaster events. This indicates that disaster-related participation may often consist of awareness programmes, community service activities, or institutional events rather than direct deployment during emergencies. Comfort and Kapucu (2006) argue that effective disaster response depends not only on individual preparedness but also on institutional coordination, inter-organizational collaboration, and clearly defined operational roles. Therefore, even well-trained volunteers may have limited opportunities to participate unless disaster management agencies actively integrate them into emergency response operations.

Similarly, Kapucu (2008) emphasizes that collaborative emergency management requires effective coordination among government agencies, volunteer organizations, educational institutions, and community groups. Strengthening partnerships between NCC units, district disaster management authorities, the National Disaster Response Force (NDRF), State Disaster Response Force (SDRF), Fire and Rescue Services, and local self-government institutions would provide cadets with greater opportunities to participate in disaster preparedness and response activities.

The findings also highlight the need to expand community-based disaster preparedness initiatives involving NCC cadets. The United Nations Office for Disaster Risk Reduction (UNDRR, 2020) emphasizes that young people should be recognized not merely as beneficiaries of disaster management but as active partners in building community resilience. Youth participation in disaster risk reduction enhances leadership, social responsibility, communication skills, and community preparedness while simultaneously strengthening local disaster management systems.

Overall, the present study indicates that although NCC cadets possess the willingness to contribute during disasters, their actual involvement in disaster response remains limited due to restricted deployment opportunities and insufficient integration into disaster management systems. Providing more opportunities for field participation, community-based disaster preparedness programmes, mock disaster operations, and

collaborative training with disaster management agencies would significantly enhance the practical experience of NCC cadets and strengthen their role in disaster risk reduction and emergency response.

Kolb's Experiential Learning Theory also explains the importance of practical involvement in disaster management. According to the theory, learners develop competence by applying acquired knowledge and skills in authentic situations, thereby completing the experiential learning cycle (Kolb, 1984). Participation in disaster response activities provides NCC cadets with opportunities to enhance leadership, teamwork, decision-making, communication, and problem-solving skills. Increasing cadets' involvement in community-based disaster preparedness programmes and actual disaster response operations would therefore contribute to strengthening their disaster preparedness and operational competence (Kolb, 1984; Comfort & Kapucu, 2006; UNDRR, 2020).

The fourth objective of the study was to identify the perceived gap between the disaster management training provided through the National Cadet Corps (NCC) and the actual disaster management needs of communities. This objective sought to understand whether the existing NCC training adequately prepares cadets to respond effectively to the practical challenges encountered during disaster situations.

The findings revealed that a substantial majority of the respondents (78.9%) perceived that a gap exists between the disaster management training provided through NCC and the practical disaster management needs of communities. In contrast, only 21.1% of the respondents believed that there was no gap between the training received and the actual community requirements. This indicates that most NCC cadets believe that the present training curriculum does not fully equip them with the competencies, practical experience, and operational skills required to effectively support communities during disasters.

The high proportion of respondents identifying a gap suggests that while NCC provides basic disaster management awareness and training, there are deficiencies in translating theoretical knowledge into practical competencies. Respondents perceived that greater emphasis should be placed on practical disaster response, field-based learning, community engagement, disaster simulations, and inter-agency coordination to improve their preparedness.

Further analysis of demographic characteristics provides additional insight into respondents' perceptions. With regard to gender, female cadets constituted the majority of respondents in both categories, accounting for 92.9% of those who perceived a gap and 93.3% of those who perceived no gap. This distribution primarily reflects the larger proportion of female respondents in the study sample and does not indicate any substantial gender-based variation in perceptions.

Analysis according to the year of study showed that third-year students (60.7%) represented the largest proportion of respondents who perceived a gap between NCC training and community disaster management needs, followed by second-year students (32.1%). Conversely, among respondents who perceived no gap, second-year students constituted the majority (60.0%), followed by third-year students (40.0%). None of the first-year or school-level cadets reported the absence of a gap. These findings suggest that senior cadets, who have had greater exposure to NCC activities and disaster-related experiences, are more likely to recognize limitations in the existing training system.

The analysis based on NCC wing indicated that respondents from the Army Wing constituted the majority in both categories. Among those who perceived a gap, 82.1% belonged to the Army Wing, while 17.9% belonged to the Navy Wing. Similarly, among respondents who perceived no gap, 80.0% belonged to the Army Wing and 20.0% belonged to the Navy Wing. This pattern reflects the greater representation of Army Wing cadets within the study rather than substantial differences between NCC wings.

The duration of NCC experience demonstrated a more meaningful relationship with respondents' perceptions. Among those who perceived a gap, 75.0% had more than two years of NCC experience, whereas only 25.0% had one to two years of experience. In contrast, respondents who perceived no gap were predominantly cadets with one to two years of NCC experience (66.7%). This finding suggests that longer involvement in NCC enables cadets to better understand both the strengths and limitations of existing disaster management training.

Participation in disaster-related activities also influenced respondents' perceptions. Among those who identified a gap, 82.1% had previously participated in disaster-related activities, whereas only 17.9% had not. In comparison, among respondents who perceived no gap, 53.3% had participated in disaster-related activities while 46.7% had not. These findings indicate that cadets with practical disaster-related experience were

more likely to recognize deficiencies in existing NCC training because they had greater exposure to the realities of disaster management and community response.

Overall, the findings demonstrate that the majority of NCC cadets perceive a significant gap between the disaster management training currently provided by NCC and the actual competencies required to respond effectively during disasters. Respondents with greater NCC experience, seniority, and previous disaster-related exposure were particularly likely to recognize this gap, suggesting that practical experience enhances awareness of existing training limitations.

One of the most significant findings of the present study is the widespread perception among NCC cadets that a substantial gap exists between the disaster management training provided through NCC and the actual disaster management needs of communities. Nearly four-fifths of the respondents identified this gap, indicating that although NCC training provides a valuable foundation in disaster awareness, it does not adequately prepare cadets for the complex realities encountered during disaster response operations.

Disaster management has evolved from a response-oriented approach to a comprehensive process emphasizing disaster risk reduction, preparedness, resilience, community participation, and capacity building. Consequently, disaster management training should equip volunteers not only with theoretical knowledge but also with practical competencies required for emergency response, coordination, communication, evacuation, search and rescue, first aid, psychosocial support, and community engagement. The Sendai Framework for Disaster Risk Reduction 2015–2030 emphasizes that strengthening disaster preparedness requires investment in people, continuous capacity building, and practical training that enhances resilience at the community level (United Nations Office for Disaster Risk Reduction [UNDRR], 2015). The findings of the present study suggest that current NCC training requires further alignment with these international priorities.

The finding that respondents with greater NCC experience and previous disaster participation were more likely to perceive training gaps is particularly significant. Cadets who have participated in disaster-related activities are more likely to compare classroom learning with the practical realities of disaster response. Through such experiences, they become aware of the operational challenges associated with

coordination, communication, resource management, and community engagement. Kolb's Experiential Learning Theory (1984) suggests that meaningful learning develops through direct experience followed by reflection and application. Therefore, cadets with greater practical exposure are naturally better positioned to identify deficiencies in existing training programmes.

The present findings also support the recommendations of the International Federation of Red Cross and Red Crescent Societies (2020), which emphasizes that disaster preparedness programmes should integrate theoretical instruction with practical simulations, field exercises, and community-based learning. Competency-based disaster training enables volunteers to develop confidence, leadership, decision-making ability, teamwork, and operational readiness. The predominance of respondents identifying training gaps indicates that such competency-based approaches require greater emphasis within NCC programmes.

Another important observation is that senior cadets were more likely than junior cadets to perceive shortcomings in the existing curriculum. This may be because experienced cadets have participated in more camps, community service activities, disaster awareness programmes, and field exercises, enabling them to critically evaluate the adequacy of current training. Similar observations were made by Johnson et al. (2014), who found that disaster education becomes more effective when learners participate in repeated practical activities rather than relying solely on classroom-based instruction.

The findings also suggest that stronger collaboration between NCC and disaster management agencies is necessary to bridge the identified gap. Comfort and Kapucu (2006) emphasize that effective disaster response depends upon coordination among multiple organizations rather than isolated institutional efforts. Similarly, Kapucu (2008) argues that collaborative emergency management requires partnerships among government agencies, volunteer organizations, educational institutions, and local communities. Increasing collaboration between NCC, the National Disaster Management Authority (NDMA), Kerala State Disaster Management Authority (KSDMA), National Disaster Response Force (NDRF), State Disaster Response Force (SDRF), Fire and Rescue Services, and local self-government institutions would provide cadets with realistic operational exposure and improve the relevance of NCC disaster management training.

The findings are also particularly relevant within the Kerala context. Kerala has experienced several major disasters in recent years, including the 2018 floods, 2019 floods, landslides, coastal erosion, and climate-induced hazards. These events have demonstrated the importance of trained community volunteers capable of assisting in evacuation, relief distribution, shelter management, emergency communication, and psychosocial support. The Kerala State Disaster Management Authority (2019) recommends strengthening community-based disaster preparedness through regular mock drills, volunteer training, and institutional collaboration. The present study indicates that NCC possesses considerable potential to contribute to these initiatives but requires further strengthening of its disaster management curriculum to effectively meet community expectations.

The perception of a gap between NCC training and community disaster management needs can also be interpreted through the lens of Experiential Learning Theory. Kolb (1984) argues that meaningful learning occurs when educational experiences closely resemble real-life situations. If disaster management training provides limited opportunities for field practice, simulation exercises, and community engagement, learners may find it difficult to apply theoretical knowledge during actual emergencies. Therefore, strengthening practical training, interdisciplinary collaboration, and community-based experiential learning would help bridge the gap between NCC training and the operational requirements of disaster management (Kolb, 1984; IFRC, 2020; UNDRR, 2015).

Overall, the findings indicate that NCC cadets possess positive attitudes towards disaster preparedness but demonstrate comparatively lower levels of disaster management knowledge and practical skills. Although NCC training provides a basic foundation in disaster awareness and first aid, greater emphasis on experiential learning, simulation exercises, field-based training, and community engagement is necessary to enhance disaster preparedness. From the perspective of Kolb's Experiential Learning Theory, repeated participation in practical activities enables learners to develop competence, confidence, and operational readiness. Therefore, strengthening experiential learning opportunities within NCC training can significantly improve the preparedness of cadets and enhance their contribution to disaster risk reduction and community resilience (Kolb, 1984; Paton & Johnston, 2017; UNDRR, 2015).

5.3 SUGGESTIONS

Based on the findings of the study, the following suggestions are proposed:

1. The NCC curriculum should be strengthened by incorporating comprehensive disaster management modules covering disaster risk reduction, climate change adaptation, community resilience, and emergency response.

2. Regular disaster mock drills, simulation exercises, and practical rescue training should be conducted to improve the practical competencies of NCC cadets.

3. Standardized first aid, search and rescue, emergency communication, and evacuation training should be provided to all NCC cadets irrespective of their wing or duration of service.

4. Collaboration between NCC, NDMA, KSDMA, district disaster management authorities, NDRF, Fire and Rescue Services, and local self-government institutions should be enhanced to provide cadets with practical field exposure.

5. Community-based disaster preparedness programs should be integrated into NCC activities to strengthen community engagement and resilience.

6. Cadets should be encouraged to participate in disaster awareness campaigns, school safety programs, and local disaster preparedness initiatives.

7. Periodic refresher training and competency assessments should be conducted to ensure that disaster management knowledge and skills remain updated.

8. NCC training should include advanced modules on flood rescue, landslide response, emergency shelter management, emergency communication, psychosocial first aid, and incident management.

9. Opportunities should be created for NCC cadets to participate in supervised disaster response operations whenever feasible.

10. Continuous evaluation of NCC disaster management training programs should be undertaken to ensure that training aligns with the evolving disaster management needs of communities.

5.4 CONCLUSION

The present study examined the preparedness of National Cadet Corps (NCC) cadets in disaster management by assessing their knowledge, attitude, and practical skills, examining the influence of NCC training, understanding their involvement in recent disaster events, and identifying the gap between NCC training and community disaster management needs. The findings provide valuable insights into the current level of disaster preparedness among NCC cadets and highlight areas requiring further improvement.

The study found that although the majority of NCC cadets possessed a positive attitude towards disaster preparedness and community service, their overall preparedness was constrained by inadequate disaster management knowledge and insufficient practical skills. While most respondents had received first aid training and had participated in disaster-related activities, their exposure to mock drills, simulation exercises, and field-based disaster response remained limited. Consequently, many cadets lacked the practical competencies necessary to respond effectively during real disaster situations.

The findings further revealed that the current NCC training programme has only a limited influence on improving disaster preparedness among cadets. Although senior cadets and those with longer NCC experience perceived comparatively greater benefits from the training, the majority of respondents believed that the existing training modules provide only basic disaster management awareness and do not adequately develop practical disaster response capabilities. Similarly, the study found that the actual involvement of NCC cadets in recent disaster events was relatively low, suggesting that opportunities for deployment and practical engagement remain limited despite the willingness of cadets to contribute during emergencies.

Another significant finding of the study is the widespread perception that a considerable gap exists between the disaster management training provided through NCC and the actual disaster management needs of communities. Cadets with greater NCC experience and previous disaster-related exposure were more likely to recognize this gap, indicating that practical experiences enable cadets to critically evaluate the adequacy of existing training. The findings suggest that the present curriculum requires greater emphasis on competency-based learning, practical field exercises, disaster

simulations, community engagement, and inter-agency coordination to prepare cadets for real-life disaster situations.

Overall, the study concludes that NCC possesses tremendous potential to serve as an effective youth volunteer force in disaster management, but this potential can only be fully realized through strengthening its disaster management training framework. Integrating comprehensive disaster risk reduction concepts, expanding opportunities for experiential learning, conducting regular mock drills and rescue exercises, and enhancing collaboration with disaster management agencies will significantly improve the preparedness of NCC cadets. Such measures will not only enhance their operational competence but also strengthen community resilience and contribute to achieving the broader goals of disaster risk reduction in India.

The study contributes to the existing body of knowledge on disaster management by providing empirical evidence on the preparedness of NCC cadets, an area that has received relatively limited research attention. It also offers practical recommendations for policymakers, NCC authorities, educational institutions, and disaster management agencies to improve disaster preparedness training among youth volunteers. Furthermore, the findings may serve as a foundation for future research on strengthening youth participation in disaster risk reduction and developing more effective community-based disaster management strategies.

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ANNEXURES

Questionnaire

Section A: Demographic Profile

1. Name: _____

2. Age: ____ years

3.Gender:

☐ Male ☐ Female ☐ Other

4.Name of College/School: _____

5.Year of Study:

☐ First ☐ Second ☐ Third ☐ PG

6.NCC Wing:

☐ Army ☐ Navy ☐ Air Force

7.Duration of NCC experience:

☐ Less than 1 year ☐ 1–2 years ☐ More than 2 years

8.Have you participated in any disaster-related activity?

☐ Yes ☐ No

9.If yes, type of activity participated in:

☐ Rescue

☐ Relief distribution

☐ Evacuation

☐ Awareness programmes

☐ Camp / shelter management

Others_____

Section B: Knowledge on Disaster Management

(Answer Yes / No)

10.Disaster preparedness means planning actions after a disaster occurs.

☐ Yes ☐ No

11.Disaster management includes preparedness, response, recovery, and rehabilitation.

☐ Yes ☐ No

12.Kerala is prone to floods, landslides, and cyclones.

☐ Yes ☐ No

13.Early warning systems help reduce disaster impacts.

☐ Yes ☐ No

14.Weather alerts and SMS warnings are examples of early warning systems.

☐ Yes ☐ No

15.Disaster management focuses only on rescue operations.

☐ Yes ☐ No

16.First aid and basic life support are part of disaster management.

☐ Yes ☐ No

17.Community participation is essential for effective disaster management.

☐ Yes ☐ No

18.Psychological support is not required during disaster response.

☐ Yes ☐ No

Section C: Attitude towards Disaster Preparedness

(Strongly Agree / Agree / Neutral / Disagree / Strongly Disagree)

19.I have a responsibility in disaster preparedness.

☐ Strongly Agree ☐ Agree ☐ Neutral ☐ Disagree ☐ Strongly Disagree

20.I am willing to volunteer during disaster situations.

☐ Strongly Agree ☐ Agree ☐ Neutral ☐ Disagree ☐ Strongly Disagree

21.I believe Disaster preparedness should be strengthened in NCC training.

☐ Strongly Agree ☐ Agree ☐ Neutral ☐ Disagree ☐ Strongly Disagree

22.I feel confident to assist people during emergencies.

☐ Strongly Agree ☐ Agree ☐ Neutral ☐ Disagree ☐ Strongly Disagree

23.I believe Youth participation is important for community disaster resilience.

☐ Strongly Agree ☐ Agree ☐ Neutral ☐ Disagree ☐ Strongly Disagree

24.I believe Disaster response should be handled only by trained professionals.

☐ Strongly Agree ☐ Agree ☐ Neutral ☐ Disagree ☐ Strongly Disagree

25.I believe Participating in disaster preparedness activities is a social responsibility.

☐ Strongly Agree ☐ Agree ☐ Neutral ☐ Disagree ☐ Strongly Disagree

26.I feel motivated to take leadership roles during disaster situations.

☐ Strongly Agree ☐ Agree ☐ Neutral ☐ Disagree ☐ Strongly Disagree

27. I believe NCC cadets play a vital role in strengthening community disaster resilience.

☐ Strongly Agree ☐ Agree ☐ Neutral ☐ Disagree ☐ Strongly Disagree

28. I feel emotionally prepared to handle stressful disaster situations.

☐ Strongly Agree ☐ Agree ☐ Neutral ☐ Disagree ☐ Strongly Disagree

29.I believe Disaster preparedness activities increase my leadership qualities.

☐ Strongly Agree ☐ Agree ☐ Neutral ☐ Disagree ☐ Strongly Disagree

30. I feel NCC training has developed my sense of social commitment.

☐ Strongly Agree ☐ Agree ☐ Neutral ☐ Disagree ☐ Strongly Disagree

31. I am willing to take initiative during disaster response even without direct supervision.

☐ Strongly Agree ☐ Agree ☐ Neutral ☐ Disagree ☐ Strongly Disagree

32. I feel that disaster preparedness training builds my confidence.

☐ Strongly Agree ☐ Agree ☐ Neutral ☐ Disagree ☐ Strongly Disagree

33. I am motivated to participate in future disaster risk reduction programmes.

☐ Strongly Agree ☐ Agree ☐ Neutral ☐ Disagree ☐ Strongly Disagree

34. I believe coordination between NCC and local authorities should be strengthened.

☐ Strongly Agree ☐ Agree ☐ Neutral ☐ Disagree ☐ Strongly Disagree

Section D: Skills and Practical Preparedness

35.Have you received first aid training through NCC?

☐ Yes ☐ No

36.Have you participated in disaster mock drills?

☐ Never ☐ Once ☐ More than once

37.Can you assist in evacuation during floods or landslides?

☐ Yes ☐ No ☐ Not sure

38.Are you trained in basic search and rescue techniques?

☐ Yes ☐ No ☐ Partially

39.Can you effectively communicate emergency instructions to the public?

☐ Yes ☐ No ☐ Not confident

40.Can you assist vulnerable groups during disasters?

☐ Yes ☐ No ☐ Not confident

41.Are you trained to manage crowds during disaster relief activities?

☐ Yes ☐ No ☐ Not sure

42.Can you identify disaster risks in your local community?

☐ Yes ☐ No ☐ To some extent

43.Are you confident in providing psychological first aid to disaster victims?

☐ Yes ☐ No ☐ Not confident

44.Can you work effectively as part of a disaster response team?

☐ Yes ☐ No ☐ Not sure

45.I lack adequate practical skills to handle real disaster situations.

☐ Strongly Agree ☐ Agree ☐ Neutral ☐ Disagree ☐ Strongly Disagree

Section E: Influence of NCC Training Modules in Preparing Cadets for Disaster Risk Reduction

(Strongly Agree / Agree / Neutral / Disagree / Strongly Disagree)

46.NCC training has improved my knowledge of disaster risk reduction.

☐ Strongly Agree ☐ Agree ☐ Neutral ☐ Disagree ☐ Strongly Disagree

47.Disaster management topics are adequately covered in NCC training modules.

☐ Strongly Agree ☐ Agree ☐ Neutral ☐ Disagree ☐ Strongly Disagree

48.NCC training has increased my confidence to respond to disasters.

☐ Strongly Agree ☐ Agree ☐ Neutral ☐ Disagree ☐ Strongly Disagree

49.Practical training provided by NCC is useful during real disaster situations.

☐ Strongly Agree ☐ Agree ☐ Neutral ☐ Disagree ☐ Strongly Disagree

50.NCC training prepares cadets to work with government and local authorities.

☐ Strongly Agree ☐ Agree ☐ Neutral ☐ Disagree ☐ Strongly Disagree

51.Disaster risk reduction receives less importance compared to physical training in NCC.

☐ Strongly Agree ☐ Agree ☐ Neutral ☐ Disagree ☐ Strongly Disagree

52.NCC training has helped me understand my role during different phases of disasters.

☐ Strongly Agree ☐ Agree ☐ Neutral ☐ Disagree ☐ Strongly Disagree

53.Training sessions include sufficient hands-on and field-based activities.

☐ Strongly Agree ☐ Agree ☐ Neutral ☐ Disagree ☐ Strongly Disagree

54.NCC training modules are updated according to recent disaster experiences.

☐ Strongly Agree ☐ Agree ☐ Neutral ☐ Disagree ☐ Strongly Disagree

55.NCC training focuses mainly on discipline rather than disaster preparedness.

☐ Strongly Agree ☐ Agree ☐ Neutral ☐ Disagree ☐ Strongly Disagree

Section F: Roles Played by NCC Cadets in Recent Disaster Events

56.NCC cadets were actively involved in recent disaster response activities.

☐ Strongly Agree ☐ Agree ☐ Neutral ☐ Disagree ☐ Strongly Disagree

57.I personally participated in disaster response or relief activities.

☐ Strongly Agree ☐ Agree ☐ Neutral ☐ Disagree ☐ Strongly Disagree

58.My involvement helped meet the immediate needs of disaster-affected communities.

☐ Strongly Agree ☐ Agree ☐ Neutral ☐ Disagree ☐ Strongly Disagree

59.NCC cadets supported local authorities during disaster situations.

☐ Strongly Agree ☐ Agree ☐ Neutral ☐ Disagree ☐ Strongly Disagree

60.NCC cadets played only a limited role during recent disasters.

☐ Strongly Agree ☐ Agree ☐ Neutral ☐ Disagree ☐ Strongly Disagree

61.Participation in disaster response enhanced my understanding of community needs.

☐ Strongly Agree ☐ Agree ☐ Neutral ☐ Disagree ☐ Strongly Disagree

62.NCC cadets were adequately guided during disaster response activities.

☐ Strongly Agree ☐ Agree ☐ Neutral ☐ Disagree ☐ Strongly Disagree

Section G: Gaps between NCC Training and Community Disaster Management Needs

(Strongly Agree / Agree / Neutral / Disagree / Strongly Disagree)

63.There is a gap between NCC disaster training and actual community needs.

☐ Strongly Agree ☐ Agree ☐ Neutral ☐ Disagree ☐ Strongly Disagree

64.NCC training focuses more on theory than practical disaster management.

☐ Strongly Agree ☐ Agree ☐ Neutral ☐ Disagree ☐ Strongly Disagree

65.Community-specific disaster risks are not adequately addressed in NCC training.

☐ Strongly Agree ☐ Agree ☐ Neutral ☐ Disagree ☐ Strongly Disagree

66.NCC cadets are not sufficiently trained to meet local disaster challenges.

☐ Strongly Agree ☐ Agree ☐ Neutral ☐ Disagree ☐ Strongly Disagree

67.More coordination between NCC units and local communities is required.

☐ Strongly Agree ☐ Agree ☐ Neutral ☐ Disagree ☐ Strongly Disagree

68.NCC cadets require more exposure to real-life disaster situations.

☐ Strongly Agree ☐ Agree ☐ Neutral ☐ Disagree ☐ Strongly Disagree

69.Training does not adequately prepare cadets for post-disaster recovery work.

☐ Strongly Agree ☐ Agree ☐ Neutral ☐ Disagree ☐ Strongly Disagree

70.Local community expectations from NCC cadets are higher than their current training level.

☐ Strongly Agree ☐ Agree ☐ Neutral ☐ Disagree ☐ Strongly Disagree

71.Disaster management training should be customized based on regional risks.

☐ Strongly Agree ☐ Agree ☐ Neutral ☐ Disagree ☐ Strongly Disagree

72.What changes or additional training do you suggest to improve NCC's role in meeting community disaster management needs?