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**THE INCLUSION OF DISASTER RISK REDUCATION IN  
CLASSROOM AND EXTRA-CURRICULAR ACTIVITIES:  
A CASE OF RURAL BALOCHISTAN, PAKISTAN**

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**ABSTRACT**

**Purpose** – Balochistan, which makes up roughly 44 percent of Pakistan’s total land area, is home to 6 percent of the nation’s inhabitants. Due to long distances and low population density, service delivery is particularly challenging. The province’s educational services are impacted by natural disasters like earthquakes, floods, droughts, and migration. Disaster risk reduction is a widely recognized concept that emphasizes appropriate education to lower an individual’s personal, familial, and communal vulnerability. The role of the school is crucial in Disaster Risk Reduction (DRR) education. As a result, the study’s

goal was to explore the approaches adopted for the inclusion of DRR through teaching in classroom and school activities.

**Methodology** – A focus group discussion with three groups of Pakistan studies and Geography teachers was conducted that consisted of 10 male and 14 female members.

**Findings** – Findings demonstrate that the current textbook continues to teach students less about disaster risk reduction; teachers include knowledge from their personal experience in planning lessons about DRR. School assemblies, child clubs and activities designed by school management, and social organizations play a prominent role in DRR education. Further, the role of teachers and school management was identified in psycho-social support during disasters and pandemics.

**Significance** – The study concludes that in addition to extracurricular activities and the teacher's role, prior disaster experience, school, and social organization played a significant role in DRR education in rural Balochistan. The study results will assist curriculum developers, policymakers, and education leadership in developing more effective school disaster management plans. The results will also clarify how schools and teachers can close the knowledge gap in disaster preparedness education. Organizations working on disaster risk education and education in emergencies will also benefit from additional research to respond to the need readily and effectively.

**Keywords:** Teaching DRR, disaster, DRR integrated learning, learning through extra-curricular activities.

## INTRODUCTION

Pakistan is a disaster-prone country with vulnerability to earthquakes, internal conflict, flooding, tropical cyclones, and drought. Pakistan's recent 2022 flood and COVID-19 pandemics significantly impacted on the educational system, leading to tragedies and events (Ronoh et al., 2015). UNICEF issued a press release after the worst flooding in Pakistan, resulting in 2 million children being unable to access their schools. School closures increase the risk of children being exploited and abused, including through forced child labour and child marriage (PITE, 2021). The COVID-19 pandemic resulted in the most extensive school closures in history, spanning the globe (Masonbrink & Hurley, 2020).

Pakistan closed schools for 64 weeks between March 2020 and March 2022, resulting in learning gaps, inequality in learning, and exposure to child labour and abuse. Children are often the most affected by natural disasters. Learning and interaction with teachers and peers help to maintain mental and psychological growth and support trauma management during crises. Due to the devastating effects of earthquakes, landslides, and floods, the earthquakes in Haiti and Pakistan brought attention to the need for disaster risk reduction education (DRRE). Over 17,000 students died due to the Haitian disaster, and 10,000 schools in Pakistan collapsed. The National Education Policy 2009 introduced the concept of DRR, focusing on curriculum, research, and teacher professional development. As a result, the study aimed to evaluate the effectiveness of DRRE textbooks and the role of teachers and school activities in DRRE. Disaster awareness is crucial in preventing and mitigating natural disasters in disaster-prone countries like Pakistan (Muttarak & Lutz, 2014). Disaster education is widely recognized as an essential component of the school curriculum; many states include it in their textbooks to mitigate disaster risk (Kurniawan & Sari, 2019; Sakurai et al., 2017).

The curriculum guides schools in achieving educational goals, with textbooks being the primary source of DRR knowledge. Formal school curricula are most effective in raising awareness and promoting student-centred learning (Artvinli, 2010); Shaw et al. (2009). Research demonstrates that the curriculum is primarily based on tacit knowledge acquired through experience and expressed through actions and attitudes (Nonaka & Nishiguchi, 2001). Learning and teaching are the most potent agents of societal change, enhancing human capacity. Learners also share this knowledge with their families and the nearby community (Hanifah et al., 2019; Lamina, 2017).

In Pakistan, textbooks contain less content about disaster knowledge, prevention, response, and trauma management while emphasizing teacher education plans and professional development. More knowledge imparted through professional development for teachers necessitates an enormous contribution than textbooks. Schools impart to students the knowledge, principles, and skills they will need to deal with environmental challenges (Cabilao-Valencia et al., 2019). Teachers' capacity and duty in Disaster Risk Reduction (DRR) are crucial for student safety and community understanding. Schools develop human capacity on specific subjects, enabling the practical application of knowledge and spreading information about recent

disasters (Herreid et al., 2011; Takahashi et al., 2015). Teachers and school administrators look to national education authorities for direction, and incorporating their knowledge and personal experience into textbook content helps reduce content deficiencies and improve instructional designs (Bacus & Alda, 2022).

The research focuses on the knowledge and skills passed down from instructors to students, with the expectation that instructors will pass on knowledge and skills to students to participate proactively in DRR-related activities and respond appropriately in the event of a disaster. It is critical in emergency evacuation because it allows families and schools to coordinate safe evacuation. To achieve this priority, DRRE must be included in all levels of school curricula. Some studies, however, contend that teaching disaster adaptation skills in schools through maneuvering is insufficient (Árvai, 2014; Bosschaart et al., 2016; Collymore, 2011; Faber et al., 2014; Nakano & Yamori, 2021). Similarly, in Pakistan, where textbook content is limited, DRRE relies heavily on teacher experience, school management initiatives, and the participation of other stakeholders. This study investigated the integration of teachers' classroom experiences in delivering disaster preparedness knowledge, as well as the role of extra-curricular activities held in school to improve DRR knowledge in public schools in rural Balochistan. The study will provide the Curriculum Wing and the Department of Education (Dep. Ed.) context for further designing content and assessing for revisions. The findings will shed light on the role of teachers and schools in bridging the disaster preparedness knowledge gap.

### **Research Objectives**

1. To explore the approaches adopted for the inclusion of DRR through teaching in the classroom and school activities.

### **Research Question**

1. How the inclusion of DRR in classroom and school extracurricular activities has been practiced?

## **METHODOLOGY**

### **Research Design**

A descriptive exploratory qualitative research design was used in this study. This study was appropriately chosen to explore the approaches

adopted for integrating DRR through teaching in the classroom and school activities. An exploratory, descriptive qualitative approach helps summarize and understand an area of interest (Ranse et al., 2012). The justification for using descriptive exploratory qualitative was that the design was appropriate because it gave the researchers a picture of what happened naturally and enabled them to contextualize how the participants perceived their roles, activities, and environments within the study context (Isaacs et al., 2013).

### **Population and Sampling**

A Focus Group Discussion (FGD) was held with Pakistan Studies and Geography teachers. Three focus group discussions were planned with ten male and fourteen female teachers teaching social and Pakistan studies in secondary and elementary schools, respectively. The length of each focus group was 60 to 90 minutes. All focus group interviews were audiotaped with the participants' permission.

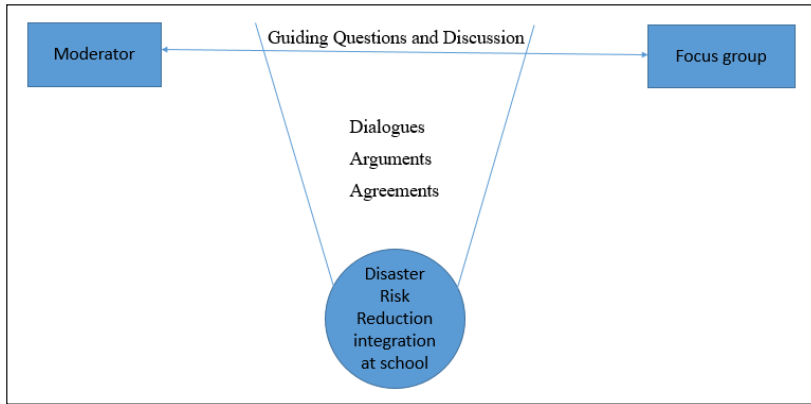
### **Data Collection**

The information was gathered through focus group discussions. Focus groups are people selected and brought together by researchers to discuss and offer their opinions on a research topic based on their own experiences. They gather people's opinions, knowledge, and attitudes about issues and investigate why certain behaviours occur. Similar to in-person interviews, this data is more difficult to obtain in response to direct inquiries (Krueger, 2014). Participants can provide additional information because of their familiarity with the school setting and curriculum and their role in delivering DRR messages (Astuti et al., 2021). The discussion involved a semi-structured questionnaire guide developed by research supervisors, curriculum wing specialists, and teacher training specialists from Provincial Institute of Teacher's Education (PITE) —the questions aimed to integrate DRR-related textbook content into classroom and school activities. During the focus group discussion, there was a continuous debating and argumentative environment among group members, with the moderator helping to keep the discussion on track. The discussion was among three focus group members, and responses were noted down by a group member (the keynote taker) and shared by the keynote taker. Unsettled responses from respondents were included as arguments that participants valued in the discussion. In the second phase, groups held debates to reach a consensus on a point from the first discussion round. A framework for focus group

discussion (FGD) was adapted based on data gathering and formation in focus group discussions. The process involved interviewees using predefined questions and answers, as illustrated in Figure 1.

**Figure 1**

*Data Gathering and Development Processes*



To obtain data on DRR integration in schools, a few guiding questions were developed to discuss DRR integration through textbook content and teaching. Aside from textbooks and instructional strategies, the role of school administration and social organizations was also identified. To foster autonomy and willingness to participate, a consent form and information sheet were distributed to all FGD participants; the composition of the focus group was instrumental in addressing ethical concerns. Participants' power dynamics were pre-evaluated, and individuals were contacted to address concerns about group composition due to the inclusion of male and female teachers. According to Hofmeyer and Scott (2007), researchers are advised to document their group and power dynamics observations and encourage participants to share their observations with the researcher.

**Data Analysis**

The focus group discussion was conducted in Urdu, and the data was translated into English for transcription and analysis. The data was transcribed in Urdu first, as the audio tape recording was in Urdu, and the audio record was matched with the transcribed data several times. After extensive exercise, the data was translated into English and

converted according to the sense and meaning of the transcribed data. Back-to-back translation was used to focus on the actual meanings of the data. Field experts and language translators were included as research team members to transcribe and sense the data. Expert and language translator feedback was balanced and incorporated into the final transcribed data for analysis. Predetermined codes, or deductive codes, were obtained from research questions. Two principal codes were focused on the research question DRR in classroom-level teaching and school extra-curricular activities. The prescribed data against each code set was explained and interpreted. The findings of the data against each code were triangulated from different subject teachers from different schools in the district with different gender perspectives regarding DRR inclusion in Jaffarabad schools.

## **THE FINDINGS AND RESULTS**

DRR in classroom teaching and extracurricular activities focused on pre-determined codes for interpretation, textbooks, teacher and classroom, school management, child clubs, and the role of social organizations as sub-codes.

### **DRR in Classroom-level Teaching**

#### ***Textbooks***

The education system plays a significant role in developing learners' awareness and resilience, especially in disasters. The curriculum and the school's roles depend on teachers' commitment to achieving educational goals. One of the male participants mentioned during a focus group discussion on DRR integration in textbooks that:

*“Textbook is a guideline, I am teaching Social studies and Pakistan studies in the same school, and there is minimum content on disaster, environment-related contents available but no material available about disaster response and emotion regulation or trauma management.”*

View of a Male FGD member

The discussion began with the availability of content about DRR and Disaster Response Management (DRM) in textbooks. One of the male

FGD members initiated the discussion by arguing that, while we accept textbooks as guidelines, there is very little content available in social studies and Pakistan studies textbooks. He also noted environmental education-related content in the textbook; however, our textbooks have no content specifically related to disaster response or trauma management. Another female participant extended that,

*“The text available in books is not providing enough knowledge about disasters, even though it is not fulfilling the needs.”*

One of the female participants supported the participant’s argument, according to her response on the textbook’s content availability. More than the text of the textbook is needed to provide knowledge about disasters. Another participant agrees with the argument and states that,

*“Textbooks by themselves are insufficient for understanding about disasters”*

According to the views of a participant, more than a textbook is needed to understand the disasters. The discussion was further extended with the point of view of another FGD member;

*“why only textbook, we should talk about the overall curriculum.”*

The FGD members view the curriculum as a holistic approach to learning and prioritize discussing the overall curriculum over discussing textbook content. Following the views of FGD members, the discussion was expanded to limit the scope of the curriculum. This is how one participant expressed her thoughts on the curriculum.

*“For me, apart from the textbook, any piece of knowledge shared in school related to disaster is included as curriculum and is the best way of knowledge sharing.”*

Statement of one of the female participants of FGD

A focus group member suggests that, aside from the textbook, any disaster-related knowledge shared during school time is accepted as part of the curriculum and a superior method of knowledge sharing. The discussion of textbook-related knowledge was expanded with the



perspectives of Focus Group members. Another participant added to the discussion by saying,

*“Story or any poem even not in written form but is presented in class or assembly is curriculum.”*

Statement of FGD Participant.

The focus group member alluded to the understanding that knowledge shared in any form related to disaster other than the book is curriculum and helpful in developing students’ disaster knowledge. Members of the focus groups were not limited to the officially written curriculum, but all activities not in the textbook but supported learning were accepted as curriculum. It was critical to determine how Pakistan’s educational system influenced students’ risk awareness and resilience in the face of disasters, as it was widely acknowledged that schools played an important role in developing awareness and resilience. Mutch (2014) verifies that schools are well-positioned to expand on these safeguards and assist in educating students on how to deal with the unexpected. They help children acquire necessary skills and dispositions through curricular and extracurricular activities, as well as teach them about disaster events.

One of the Focus group members criticized that:

*“The textbook we teach in school was designed in 2006, education in emergency policy was developed in 2009, we suffered from the flood in 2010 till 2013, for us, this was a history however, no revisions made after that.”*

Criticism of one of FGD member

In terms of textbook knowledge, it was discovered that the current curriculum was developed in 2006. The textbooks are the same as before the floods of 2010 and 2013. Although the floods of 2010 and 2013 were part of Baluchistan’s history, no changes in curriculum were made.

One of the participants further debated on textbook content this way;

*“Content is available in textbooks of geography and Pakistan studies about disasters and prevention. Our students faced more than this, how can we prevent*

*natural disasters. Important is to know what to do during a disaster and how to manage trauma.”*

View of one of the group member

According to one of the FGD participants, there is content in textbooks on geography and Pakistan studies about disaster prevention. However, the students of Jaffarabad faced more than what was available in textbooks. Rather than disaster prevention, the FGD member emphasized the importance of disaster response and trauma management strategies. Members of the group also discussed the role of the subject teacher and school administration in disaster knowledge, prevention, response, and emotional regulation.

### **Teacher and Classroom**

The FGD discussion focused on the role of the teacher and the classroom. Le Brocque et al. (2017) already verified that teachers are in a unique position to provide critical support to children who have experienced potentially traumatic events and to assist in identifying children who may be experiencing ongoing psychosocial difficulties. According to the view of a female participant,

*“Textbook knowledge is insufficient; in addition to the information that the textbook provides, the teacher also has a responsibility to impart knowledge about DRR”*

According to the views of one female participant, the textbook has less information, but in addition to this information, the teacher is responsible for providing knowledge about DRR.

*“Textbook can't include everything related to the disaster, but Teacher and School management and other bodies play an active role related to Disaster knowledge, prevention, response, and emotion regulation.”*

Views of a female FGD member

One of the FGD participants expanded on the role of textbooks, teachers, and school administration. She implies that the textbook cannot cover everything related to the disaster, whereas teachers, school administration, and other stakeholders actively participate in DRR and DRM. Schools can provide a safe and comfortable

environment for students to recover from traumatic experiences and transform them into positive learning opportunities (Lazarus et al., 2003). Regarding emergency response, emotional regulation, and the actual situation during a disaster, textbooks can only provide theoretical knowledge. When asked how they teach disaster-related content, one of the participants added:

*“To stimulate student learning, the teacher also shares personal life experiences with the students in the classroom.”*

Views of a male member

Participants shared that while teaching DRR-related content in the classroom, we share personal experiences to stimulate students' learning. One of the participants extended that,

*“I do not believe that textbooks are useless for teaching about disasters. They discussed what they saw as eyewitnesses to the flood situation between 2010 and 2013, whereas the textbook only provided theoretical information.”*

One participant added that, though textbooks are not entirely useless, they provide theoretical knowledge, which our students could apply to their own experiences because they had to deal with floods between 2010 and 2013. Another participant adds to the conversation by saying:

*“The textbook contains only knowledge about disasters, there is nothing practical in a textbook but only an idea development about the situation. The students now in elementary and secondary grades did, not experience the flood situation of 2010-2013 so they are not aware of response and emotion regulation concepts. There must be some drill exercises or case studies to promote knowledge through the curriculum.”*

Views of a FGD male participant

It was also emphasized that people in a disaster situation are more likely to use response and emotion regulation mechanisms. The textbook's role in disaster knowledge, mitigation, response, and

emotion regulation was limited and accepted as theoretical knowledge. Due to the lack of response and emotion regulation material in the curriculum, teachers recommended including material related to the subsequent case studies that responded to disasters for emotion regulation. Direct experience provides an accurate understanding of a disaster and may provide the most valuable cues for future decision-making in dangerous situations. Guo and Li (2016) verified that ideas for understanding how direct experience affects a mega-disaster are critical. A FGD member discussed Response and Trauma management, using COVID-19 as an example.

*“Students are being affected by the disaster; a current example is COVID-19, there are proven efforts of school management, and teachers on trauma recovery. Textbook knowledge is not enough; The teacher plays a role to coin conveying context knowledge to students other than the knowledge textbooks provide.”*

View of one of the FGD members.

The role of teachers and school administrators was discussed in the context of COVID-19, where no knowledge was available in a textbook, and teachers and school administrators played a critical role in post-pandemic school reopening and trauma management. Similarly, during the FGD, it was identified and agreed that after a disaster, particularly during recent pandemics, the teacher not only conveys textbook knowledge through the online system but also regulates the trauma and effect of school closure and look-down. According to research, disasters are felt collectively and recalled collectively. Disaster memories serve as social glue among affected communities and are essential for healing. They focus on educators who have served as emergency responders (Hobbins, 2021). In the context of COVID-19, teachers served as infection control and hygiene supervisors and educators.

Furthermore, attention to students' mental health and well-being has been emphasized. Because of their increased responsibilities, teachers have been subjected to a great deal of emotional and psychological stress due to the COVID-19 pandemic. According to research, teachers are more likely to report anxiety, depression, stress, post-traumatic stress symptoms, burnout, fatigue, and sleep problems in this context (Beames et al., 2021; Nabe-Nielsen et al., 2021). A participant extends

the role of capacity-building activities on subject matter and the role of the teacher in knowledge sharing;

*“We have received a few training under a professional development plan related to Disaster risk reduction and safety. We were advised to share this information with students during classes or school assemblies, this was helpful.”*

View of an FGD member.

A participant speaking about sharing knowledge outside of textbooks gave examples of knowledge-sharing activities that the teacher had access to through professional development plans for DRR and safety. In addition to the necessity of safe spaces and emergency exits from the school, group members also agreed on the significance of knowledge-sharing activities during lessons or assemblies. They concurred that the government’s school infrastructure needs to be improved and that there is no concept of an emergency exit or safe spaces during emergencies. A participant pointed out that:

*“After the 2010-2013 incident, we educate our children about safe spaces based on personal experience.”*

One of the participant’s points out that since the incident in 2010–2013, we have taught our children about safe spaces in case of any emergency or uncertainty; this is all due to personal experience. Another participant adds,

*“Regarding safe spaces and school emergency exits, yes we have gained the idea from training, however, there is no alternate emergency exit in public school infrastructure.”*

View of a participant

The disaster preparedness attributes include safe spaces, evacuation, and emergency exit signs. Building emergency exit signage is essential for providing directions to occupants and speeding up evacuations. It is intended to advise locals on how to flee in emergencies (Xie et al., 2012). The members of the focus groups shared that they learned the idea of an emergency exit during training sessions; however, most of the school building was ancient, and the government only spent money

on maintenance. Preparedness is vital for emergency school response, with a few key attributes, such as emergency escape signboards, emergency supplies, emergency grab bags, school-level disaster-management task forces, and disaster preparedness guidelines. These characteristics demonstrate the level of preparedness for disaster that schools in disaster-prone areas have. Shah et al. (2020) suggest that natural disasters in general and the possibility of flooding, have always compelled us to reconsider how we can ensure the safety of educational facilities.

Another Participant extended the discussion on safe spaces;

*“The teacher talked about safe and unsafe spaces in case of emergency. There is little content about safe spaces during earthquakes in textbooks. Yes, we tell our students about the waterlogging on canal banks, because this is our need, especially after the incident of 2010-2013, we are now educating our children about safe and unsafe spaces, and this is all due to Personal experience.”*

Disaster prevention guidelines require knowledge of safe and unsafe spaces. The safe spaces discussion was expanded to include the community’s own experience. It was discovered that the textbook discusses safe spaces during earthquakes, and based on the community’s own experience, the teacher discusses waterlogging and unsafe spaces near water banks.

### **Extra-curricular Activities**

Co-curricular activities are an excellent way to introduce students of all ages to disaster risk reduction knowledge, skills, and competencies. The study emphasized the importance of schools’ co-curricular activities in providing knowledge about DRR and DRM.

### **Role of School Management and Child Club**

Extracurricular activities are part of learning and are not solely the responsibility of textbooks and teachers. These activities can be separated into different school hours. Because elementary and secondary schools frequently lack a separate disaster education curriculum, it is critical to incorporate disaster education into curricular and extracurricular activities to increase the number of hours spent on

it and maintain its effectiveness (Shiwaku & Fernandez, 2011). School administration plays a crucial role in DRR; school administrators serve as reformers. They are also experts in disaster preparedness, which includes creating disaster communication plans, whole-school approaches to health and safety, identifying available support agencies, compiling lists of emergency instructions, and holding planning meetings to determine school needs (Ecolin-Campilla, 2016). DRR and DRM is integrated into the role of school management in FGD. During the 2010–2013 flood, FGD participants identified the role of school management. According to one of the male FGD members:

*“We experience that during a disaster, the school and the Masjid was the first social place, for the shelter of the affected community.”*

Views of a Participant

During the floods of 2010–2013, the community used the school and the mosque as shelters, according to a discussion of management’s role in integrating DRR and DRM. The FGD also identified schools and mosques as social gathering places for disaster relief. Previous research has identified (*masjid*) space as a form of shelter. Using mosques as emergency shelters highlights the Islamic view of mosques as centres of charitable and social activities (Utaberta & Asif, 2017). Similarly, the school grounds were used as a shelter during the Jaffarabad district flood emergency from 2010 to 2013. The discussion was further extended as one of the FGD members shared that,

*“After flooding many social organizations arrange disaster response and Management related activities in school and used classrooms for community meetings.”*

Members of the focus group identified the use of school buildings and classrooms for shelter and learning environments following the flood. FGD participants discovered that many social organizations held disaster response and management meetings on school grounds and in classrooms. These sessions were planned for various groups, such as the community, students, and teachers. One of the FGD members extended that;

*“The Education Department arranges for a select group of students to receive lectures on emergencies, first aid, and protective measures against extreme weather twice*

*a year through the Civil Defense Department. Following the lecture, they plan a visit to the Civil Defense Museum, where they will practice first aid and drills. Later, the student shares their knowledge with the other students.”*

As a follow-up to discussions about the role of school administration and extracurricular activities, the education department plans a lecture on emergency first aid and how to avoid extreme weather for selected students twice a year. They practiced first aid and drills after the lecture. The students then repeat the lesson to their classmates. One of the female members added,

*“The school management plans different awareness activities related to disaster knowledge and time to time implement them through school assemblies.”*

View of a focus group member

One of the members mentioned that the school administration planned various disaster knowledge activities and delivered these learning sessions through school assemblies. The significance of school assemblies has already been identified in the literature, which is also associated with disaster preparedness. There are few schools in rural areas where various NGOs collaborate on DRR; they visit, conduct workshops, offer technical assistance, and assist in creating of educational materials with the help of school staff. Eslamian et al. (2021) verified that the preparedness initiative includes extracurricular activities during school assemblies, competitions, school days, and after-school clubs.

*“Knowledge sharing during assembly is an example of awareness raising effort for students from school management.”*

View of another FGD member

Another participant in the FGD continued the conversation about the value of the school assembly as a venue for information exchange and considered the assembly as a means of educating students. One participant also mentioned the importance of school administrators and teachers in providing students with psychosocial support during pandemics and other potentially hazardous seasonal conditions.

*“Few school leaders talked about developing awareness of safety from seasonal flu, heat strokes, malaria, and*



*typhoid on their capacity. After the pandemic, students suffered from depression due to deaths in families, and many of them were not able to continue their education due to poor economic status. School leaders and teachers were those, who provided, financial and psychosocial support to students this was purely the school's initiative.”*

During the discussion, the role of the school in providing financial and psychosocial support was identified. A few school teachers mentioned in the FGD that the school offers support without waiting for official notice and raises awareness of potential health risks. This includes educating people about typhoid, malaria, heatstroke, and seasonal flu. Teachers and school administrators worked on psychological support and student wellness. In a few cases, the school management and teachers helped financially support a small number of families. An example of recent pandemics was that when schools remained under lockdown, many students were depressed due to deaths in their families, and many students were unable to continue their studies due to low-income family economic status. Teachers and students struggled during the COVID-19 global epidemic, and stress and anxiety among students undoubtedly rose during this troubling time (Baltaci et al., 2020; Dolu, 2021). Teachers mentioned the assistance of social organizations in disaster preparedness and response during the focus group discussion. One of the participants hinted during the conversation that:

*“Due to limited resources, we rely more on social organizations to play a part in disaster preparedness exercises. UNICEF, the Pakistan Red Crescent Society, and other organizations held numerous training sessions on basic first aid as well as on how to stay safe during an earthquake.”*

Views of one of the FGD member

Social organizations support disaster risk management in schools. For schools, they plan a variety of activities based on their expertise. The participants in the focus group concurred that various organizations work with school administration to plan drills and teach students basic first aid. The topic of child clubs and the importance of first aid instruction in schools was also covered in greater detail during the discussion. Participants shared that:

*“The Pakistan Red Crescent Society (PRCS) donated first aid kits that are still used in schools, and they also trained a few teachers and students in child clubs for CPR, bandages, etc. They train a few more students as new members of the child club after a few pass-outs. All schools were still engaging in this practice. The concept of Girl Guide is shifted to Child Club now.”*

Viewpoint of participants.

The curriculum includes school administration and social organizations, providing engaging and enjoyable methods for learners of all ages to introduce essential knowledge, abilities, and competencies in various forms (Petal & Izadkhah, 2008). PRCS trains teachers and child club members for basic first aid instruction, passed on to more students. Safety clubs, scouting badges, and project activities foster children’s interest and leadership, allowing for the development of educational materials, games, performances, and artistic engagement. Disaster drills are frequently used as the cornerstone of informal education because they are school-wide events rather than single-course occasions. Simple drills consist of responding to early warnings and practicing what to do in case of a fire, earthquake, or other hazards. Through simulation exercises, response skills like fire suppression, first aid, injured transport, non-medical triage of mass casualties, damage assessment, and light search and rescue are developed and practiced (Petal & Izadkhah, 2008). The FGD participants believed DRRE needed more than the initiatives already made progress. The discussion was further extended to;

*“Due to climate change we may suffer more from disasters and we have no preparation, during pandemics if we were prepared, we did not suffer as much as we did in pandemics. Content in textbooks and instructional strategies is not only enough for Disaster Risk Reduction Education.”*

Views of one of the Participant

The focus group participants’ observations on disaster preparedness could have been more satisfactory because they concurred that despite knowledge and prevention, we still suffer more from pandemics and disasters. As a result, our DRRE and knowledge need to be improved to handle disasters. Schools lack direction and assistance to promote

DRR behaviour, which results in a lack of attention to it (Rambau et al., 2012). One of the participants in the focus group stated that we need more advanced preparation and knowledge to respond to disasters.

*“Normally, after the incident, various organizations and governments hold meetings with the community and schools; however, before disasters, there are very few preparedness activities on the ground. We propose that yearly 2,3 sessions be held as capacity-building or refresher sessions. Government and development organizations respond when incidents occur, but there is no planning before any incident.”*

View of one of the FGD Member

A lack of capacity-building training was identified during the discussion as social organizations and governments respond to disasters while mobilizing the community for disaster preparedness activities. Before any disaster, prevention and mitigation activities must be carried out, and yearly capacity-building sessions or refreshers are required.

### **Role of Social Organizations**

The government recognizes the vital role of social organizations in disaster management. It encourages local communities, the private sector, and non-governmental organizations (NGOs) to participate in public affairs management (Lassa, 2013). During the focus group, one of the participants stated that social organizations played an essential role in disaster preparation, response, and even the COVID-19 pandemic.

*“In District Jaffarabad, social organizations worked alongside the government during and after the 2010 disaster. They assisted during disaster response by conducting awareness sessions in schools and organizing drills for students.”*

View of one of the participant

The focus group discussed how social organizations help spread preventative supplies and set up hand-washing stations during pandemics. The government organized online sessions with assistance

from UNICEF and the European Union, while no awareness sessions were physically held in schools by social organizations.

*“During the COVID-19 pandemic, social organizations played an important role. Preventive items such as masks, sanitizers, and awareness pamphlets were distributed, and almost every school had a hand washing station. However, training sessions were not physically scheduled in the school. During this time, teachers conducted awareness and prevention sessions for students on their own. UNICEF and the European Union have helped the Provincial Institute of Teacher Education (PITE) organize some online sessions before returning to school.”*

Views of FGD Members

The closure of educational institutions disrupts students’ learning, so practical steps must be taken to ease anxiety and stress among administrators and teachers as they adjust to the new learning environment. (PITE, 2021). According to a report from the Provincial Institute of Teacher Education, Balochistan, published in 2021 to ensure safe educational activities during pandemics, UNICEF and the European Union provided orientation sessions to teachers and school principals in 33 districts of Balochistan.

## DISCUSSION AND RECOMMENDATIONS

Research shows that education and disaster knowledge are closely linked. Schools provide students with the necessary knowledge, skills, attitudes, and values to handle environmental challenges (Árvai, 2014; Cabilao-Valencia et al., 2019; Muttarak & Lutz, 2014). DRR has been promoted as a part of the educational system in many countries. The FGD’s findings show that Pakistan’s curriculum was introduced in 2006 and has not undergone any revisions since. Students rely heavily on school textbooks for knowledge, which leads to behavioural changes and knowledge transfer (Seddighi et al., 2022). The selected Pakistan Studies and Social Studies textbooks provide little information about disaster response and trauma management (DRM). It is recommended that the curriculum be revised to reflect the 2009 policy recommendation on DRR inclusion. As part of the

curriculum, Jaffarabad district subject teachers considered overall learning, knowledge shared after training, classroom activities, sharing a disaster experience, and the efforts of school management and social organizations. The FGD member claims that the curriculum covers disaster preparedness and risk reduction. It was determined that the textbook only offered recommendations for risks. The participant is referring to the notion that disaster-related information shared in any format outside of textbooks is beneficial for enhancing students' knowledge of disasters and is included in the curriculum. For disaster education, the roles of instructional strategies, school administration, and social organization were well-known and beneficial. The curriculum's emphasis on knowledge exchange aims to promote resilience through learning. Naheed (2021) verifies that DRR and resilience better capture the varying aspects of disaster risks, including their ongoing nature and the possibility of mitigating them.

Members of the FGD were not limited to the formally written curriculum; all extracurricular activities that support learning but are not listed in the textbook were accepted as curriculum. According to research, teaching students about risks and disasters should be emphasized because it is very effective (Rambau et al., 2012). All extracurricular activities held in school by child club members regarding first aid training, drill exercises, precautionary measures against heatstroke or harsh weather, teachers' experiences sharing activities after a training session, and DRR and DRM sessions conducted by social organizations were accepted as curriculum. In addition to the knowledge taught, the school's role in instilling awareness and resilience as part of the curriculum was acknowledged. It is recommended that school leadership and training institutes develop and induce informal education content related to DRR and DRM for staff training and cascading at school.

Flood disasters have plagued the community of Jaffarabad for three years and COVID-19. Textbooks are limited in disaster knowledge, mitigation, response, and emotion regulation. People who have been through a disaster have a better understanding of safety, response, and emotion control mechanisms. However, the complexity of disaster experiences affects survivors in various ways. Astuti et al. (2021) verified that direct and indirect experiences significantly influence people's reflection on and discussion of disasters, enhancing their awareness, knowledge, and understanding of their effects. The focus

group suggested that textbooks include case studies on disaster response and emotion regulation to address the lack of information.

During COVID-19 disaster, the teacher served as a front-line workers, imparting knowledge from the book and experience, knowledge gained through professional development plans, and knowledge gained from being an eyewitness. Their post-disaster learning and how they applied it in the classroom were critical. It is also suggested that more DRR and DRM training be provided to students and teachers. Despite numerous studies indicating that disaster experiences significantly impact on individuals' disaster awareness and preparedness, there needs to be more data on how this knowledge is applied in the workplace. (Astuti et al., 2021; Lindell & Prater, 2000; Wachinger et al., 2013).

Teachers impart knowledge gained through training to students in the classroom and during assemblies. School assemblies were also identified as helpful for disseminating information on critical risks to protect students from health issues in Jaffarabad during challenging climatic conditions. It is recommended that written material on hazards, extreme weather conditions, and DRR awareness be distributed. The school administration will further discuss and disseminate this material in school assemblies and during playtime. Muzenda-Mudavanhu et al. (2016) endorse that school assemblies serve as educational campaigns. No matter how they are disseminated, awareness campaigns assist kids in learning about disasters.

Teachers and school administrators were crucial in reopening schools following the pandemic and in managing trauma. According to studies, teachers are essential for psychosocial support and trauma management. Teachers in both public and private schools were among those who promoted public health by teaching students how to take care of themselves in the event of a COVID-19 pandemic. Teachers must offer students psychosocial support by creating a safe space to express their feelings and learn (Aperribai et al., 2020).

Research suggests schools should serve as evacuation shelters to teach students about disaster management. The infrastructure in Jaffarabad public schools does not include a designated area for emergency gatherings, and there is only one entrance and no emergency exit concept. Even in schools with multiple entrances, the concept

of an emergency exit is absent. Natural disasters are incredibly unpredictable. Schools must consider the risks that students face and act quickly in the event of a disaster while classes are in session. Wang (2016) suggests that disaster occurrences are incredibly unpredictable. Schools must consider the risks that students are exposed to and act quickly in the event of a disaster while classes are in session. Despite disaster SOPs, public schools in the district of Jaffarabad lack emergency exits and safe spaces. It is recommended to improve safety during school renovations.

Providing emergency shelter for victims of natural disasters is part of DRR strategies. It is essential for the effective management of neighbourhood resources during emergencies. Depending on the availability of suitable locations, various circumstances necessitate various strategies for providing victims with emergency shelter (Asif & Utaberta, 2020). In Pakistan, the most common locations for shelter during disasters are public places, mainly mosques and schools. In Jaffarabad, between 2010 and 2013, organizations carried out disaster response and first aid-related activities in public schools, using schools and masjids as temporary shelters. Prioritizing temporary shelters, mosques, churches, schools, and universities were used, with emergency tents erected near villages where the nearest town was too far or already full (Shaw, 2014).

Social organizations play an essential role in safety and DRR. The school committees, like Child Club, actively extend support in this regard. The world over, programs for school-based disaster education and community-based disaster risk reduction (DRR) are being promoted (Toyoda et al., 2021). Civil Defense and the Pakistan Red Crescent Society (PRCS) provide first aid training to several teachers and child club students. This training helps to ensure sustainability by improving leadership skills and developing the family's overall capacity. Furthermore, organizations were implementing school-based disaster risk management (SBDRM), which educates students through disaster drills as a cornerstone of informal education throughout the school.

Organizations provide disaster prevention and response services during a disaster, but they switch after the effects have subsided. Service duplication occurs because of the rush of organizations sometimes, a single community benefits. Coordination needs to be improved



in disaster response activities. Victims need essential services to survive, but a lack of coordination prolongs their suffering. Due to a lack of coordination during the Jaffarabad emergency, replication and reduplication of services were occupied, making the community more inconvenient. This is common in disaster operations research to verify the lack of coordination in disasters, which has happened everywhere. Bahadori et al. (2015) support the argument that due to a lack of coordination and compliance with necessary protocols among organizations and groups involved in unexpected events in Iran, planning and management decisions are made without using information.

The discussion reveals that humanitarian workers and the government should regularly hold disaster prevention training sessions before disasters. Community needs were identified as community-based disaster risk reduction (CBDRR) and community-based disaster risk management (CBDRM). According to Maskrey (2019) people must be empowered for vulnerability reduction to be effective. The process involves transforming communities from passive objects to active subjects, enabling them to voice their needs, negotiate resources, and direct partnerships for local risk management (Ramalho, 2019). Although the community did not know the concepts of CBDRR and CBDRM, they identified a need. In addition to CBDRM, school-based disaster risk reduction (SBDRR) is widely used in disaster studies and is critically crucial in disaster-prone areas.

## **CONCLUSION**

The study focused on the role of schools, textbooks, instruction strategies, and extracurricular activities in disaster education and sustainability. Textbooks were identified as guidelines; however, all of the school's activities were accepted as curriculum. In this case, the teacher's personal experience, textbook content, and the role of student clubs and social organizations were grouped as a curriculum. The findings revealed that the textbook lacks knowledge about DRR, with no material related to disaster response or trauma management added. Through experience sharing and training sessions, the teacher, school administration, and social organizations were more involved in teaching DRR. The effectiveness of school assemblies and child clubs was identified as a tool for sharing knowledge and raising student



awareness about health risks and first aid. The urgent need for disaster prevention training sessions for teachers, community members, and students was identified before any disaster, as response and trauma management-related activities are more needed for disaster response.

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