Exploring Climate Change:Impacts on Girls Primary Education in Lasbela Balochistan.

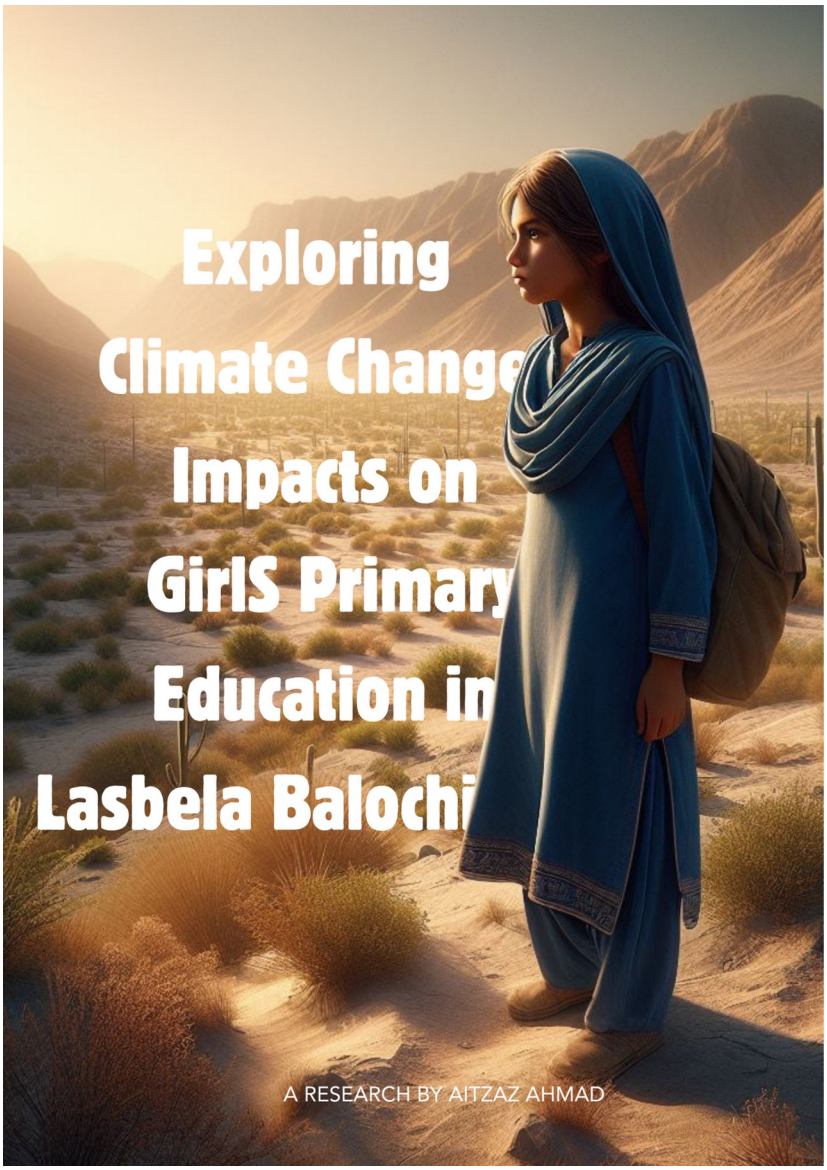

Table of contents

1. Policy Research Statement:..... 3

Policy Statement:..... 4

To address the socio-economic vulnerabilities affecting girls' primary education in flood-prone Lasbela, Balochistan, targeted interventions must focus on resilient infrastructure, financial support to families, and community engagement. These measures aim to mitigate climate change-induced disruptions, ensuring sustained access to education and promoting resilience among vulnerable populations..... 4

2. Abstract :..... 5

3. Introduction:..... 6

4. Literature Review:..... 7

5. Methodology:..... 8

6. Results:..... 9

7. Discussion :..... 12

8. Conclusion :..... 14

9. Reference :..... 15

1. Policy Research Statement:

Policy Statement:

To address the socio-economic vulnerabilities affecting girls' primary education in flood-prone Lasbela, Balochistan, targeted interventions must focus on resilient infrastructure, financial support to families, and community engagement. These measures aim to mitigate climate change-induced disruptions, ensuring sustained access to education and promoting resilience among vulnerable populations.

2. Abstract :

This research investigates the impact of climate change on the socio-economic vulnerabilities affecting girls' primary education in Lasbela, Balochistan. Both qualitative and quantitative methods, including interviews, questionnaires, and school visits, were employed to gather data, particularly from flood-affected schools and villages within Lasbela. The study reveals significant disruptions in girls' education following a flood event, with an average 17% dropout rate, a 32% change in performance, and a substantial 51% decline in attendance observed across ten schools. Financial constraints emerged as the primary contributing factor, accounting for 68% of the disturbance in girls' education. These findings highlight the profound impact of climate change-induced disasters on socio-economic vulnerabilities, particularly among families in Lasbela, underscoring the urgent need for targeted interventions to mitigate these effects and promote educational resilience in the face of climate change challenges.

3. Introduction:

1.1 Background:

Climate change poses a significant global challenge, impacting various aspects of life worldwide (IPCC, 2021). Pakistan, particularly regions like Lasbela in Balochistan, faces substantial challenges as one of the nations highly affected by these impacts (NDMA, 2022). The devastating floods of 2022 in Lasbela highlighted the harsh realities of climate change, affecting critical elements such as freshwater resources, agriculture, mental health, and education (UNDP, 2023). In this context, education emerges as a prominent concern, especially for vulnerable groups like girls (UNICEF, 2022). However, climate change-induced floods significantly impede girls' access to education, underscoring the urgent need to address this issue (UNESCO, 2020).

1.2 Research Problem or Question:

This study aims to investigate the specific difficulties faced by vulnerable girls in Lasbela, Balochistan, concerning primary education following the floods of 2022. The research seeks to understand the complex interactions between climate change-induced floods and the socioeconomic vulnerabilities that hinder girls' access to primary education in the region.

1.3 Research Objectives:

The objectives of this research are:

- To explore the impact of climate change-induced floods on the socioeconomic vulnerabilities affecting girls' primary education in Lasbela, Baluchistan.
- To develop policy recommendations for creating a more equitable and resilient educational system in the face of climate-related disasters.

1.4 Significance of the study

The study on exploring climate change impacts on girls' primary education in Lasbela, Balochistan, holds immense significance in addressing the intersectionality of climate change and education, particularly concerning vulnerable populations. Lasbela, being highly susceptible to climate change-induced disasters like floods, experiences profound disruptions in various aspects of life, including education. Understanding the specific challenges faced by girls in accessing primary education due to these climate-related events is crucial for designing effective policies and interventions. By shedding light on the barriers and constraints faced by girls in Lasbela, this study can inform targeted strategies aimed at safeguarding their right to education amidst the escalating impacts of climate change, thereby contributing to sustainable development efforts in the region.

4. Literature Review:

2.1 Overveiw of the literature and key theories

The literature examining the intersection of climate change and education highlights a growing concern, particularly emphasizing the adverse effects on girls in low- and lower-middle-income countries. Estimations from the Malala Fund for 2021 underscore the anticipated hindrance of millions of girls from completing their education due to climate-related events, with projections indicating a substantial increase by 2025 (Malala Fund, 2021). Despite this alarming trend, existing research tends to focus primarily on tertiary education, with minimal attention given to primary and secondary school education, as reflected in the National Education Policy 2017-2025.

In Pakistan, the government's commitment to a green and low-carbon development pathway, outlined in the National Climate Change Policy (NCCP), prioritizes climate change adaptation. While the NCCP acknowledges the disproportionate impact on women and those living below the poverty line, policy measures primarily center on enhancing coping capacities, including the proposed development of a climate change curriculum in the formal education system, particularly in higher education. However, limitations in the actions proposed for the education sector in the Framework for Implementation of Climate Change Policy (2014-2030) are identified, mainly encompassing short-term initiatives such as local

water harvesting and curriculum integration. Moreover, the effectiveness of bodies like the Pakistan Climate Change Council and Authority in addressing the educational implications of climate change remains to be explored under the Climate Change Act 2017-2025.

2.2 Identifying Gaps in Knowledge:

Despite these efforts, there are significant gaps in addressing the educational vulnerabilities of girls, particularly in primary education, in the context of climate change. Existing literature predominantly focuses on tertiary education and lacks sufficient attention to primary and secondary education, where girls may face unique challenges. Furthermore, while policy frameworks acknowledge the impact of climate change on education, the effectiveness of implemented measures, particularly in mitigating the socio-economic vulnerabilities of girls' primary education, remains unclear.

2.3 Theoretical framework

In examining the intersection of climate change and girls' primary education in Lasbela, Balochistan, the application of Ecological Systems Theory offers valuable insights into the multifaceted influences shaping girls' educational experiences. Within this framework, the study can explore how climate change impacts, such as flooding and water scarcity, interact with various ecological systems surrounding girls, including their families, communities, and schools (Bronfenbrenner, 1979). For instance, the theory can elucidate how the loss of livelihoods due to climate-related disasters may compel families to prioritize economic activities over education, leading to increased dropout rates among girls. Furthermore, the theory can highlight how community resilience initiatives, such as the establishment of temporary learning centers or the provision of psychosocial support services, can mitigate the adverse effects of climate change on girls' educational access and retention.

Feminist theory also emerges as a pertinent framework for understanding the gendered dimensions of climate change impacts on girls' primary education in Lasbela. By adopting a feminist lens, the study can analyze how patriarchal norms and cultural practices intersect with climate-related vulnerabilities to exacerbate educational inequalities for girls. For example, entrenched gender roles may limit girls' mobility during disasters, hindering their access to educational facilities or exacerbating risks of gender-based violence. Moreover, feminist approaches to education and empowerment can inform interventions aimed at dismantling systemic barriers and fostering girls' agency and resilience in the face of climate change challenges (hooks, 1984). By integrating these theoretical perspectives, the study can offer nuanced insights into the complex dynamics shaping girls' educational experiences amidst climate change impacts in Lasbela, Balochistan.

5. Methodology:

3.1 Research Design

This research aimed to explore the socio-economic impact of the 2022 monsoon floods on girls' primary education in Lasbela, Balochistan. To achieve this, a mixed-methods research design was employed, combining qualitative and quantitative approaches to provide a comprehensive understanding of the challenges faced by the affected communities.

3.2 Data Collection Methods

On-the-ground data collection was conducted through in-person visits to 10 affected girls' schools in Lasbela. These visits facilitated firsthand observations of the flood's impact on infrastructure, learning environments, and the overall educational ecosystem. Additionally, in-depth interviews were conducted with girls, teachers, and community leaders during these visits to gather personal narratives and qualitative insights into the specific challenges faced. A meeting with 15 stakeholders was organized involving community leaders, educators, parents, and local officials to gather qualitative insights and understand broader social, economic, and cultural factors influencing girls' education post-flood.

A structured questionnaire was also designed to collect quantitative data on dropout rates and socio-economic conditions. The questionnaire was administered in selected schools, ensuring a systematic and representative sample. Friends from flood-affected villages were involved in distributing and collecting questionnaires to reach a broader spectrum of participants while maintaining ethical standards and ensuring informed consent.

3.3 Sampling Techniques

The selection of schools and participants was purposeful, aiming to ensure representation from various areas impacted by the floods. Convenience sampling was used for participant selection in interviews and stakeholder meetings, considering accessibility and willingness to participate. Stratified random sampling was employed for questionnaire administration to ensure a systematic and representative sample.

3.4 Data Analysis Procedure:

Quantitative data collected through the questionnaires were analyzed using Microsoft Excel for statistical analysis. Qualitative data from interviews and stakeholder meetings were transcribed, coded, and thematically analyzed to identify recurring patterns and key insights. The integration of both qualitative and quantitative findings provided a nuanced understanding of the socio-economic impact of the floods on girls' primary education, informing targeted strategies for resilience and empowerment in the affected communities.

6. Results:

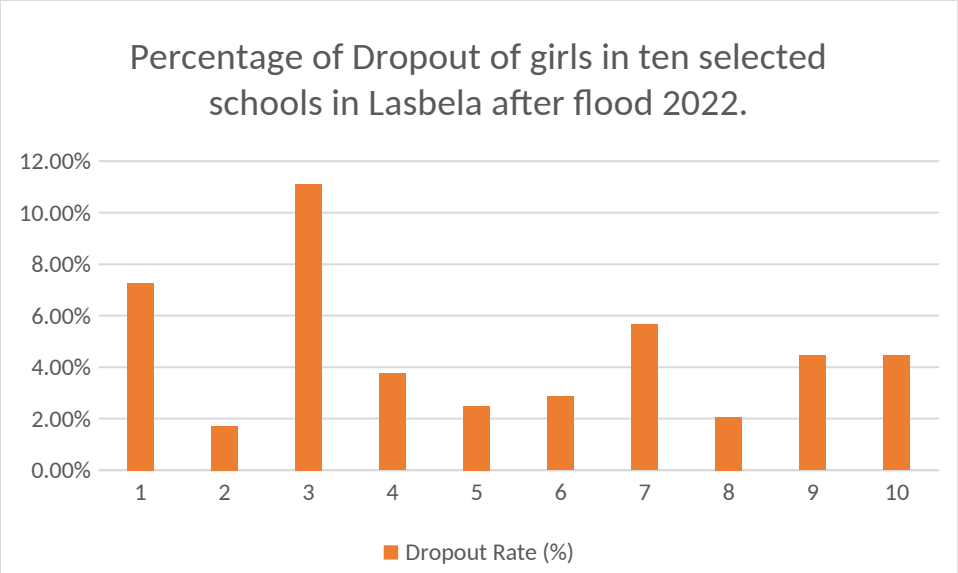

Chart 1 demonstrates a notable trend following the flood, a significant number of girls from all ten affected schools withdrew. This increase in withdrawal rates is primarily attributed to the socio-economic vulnerabilities exacerbated by the flood.

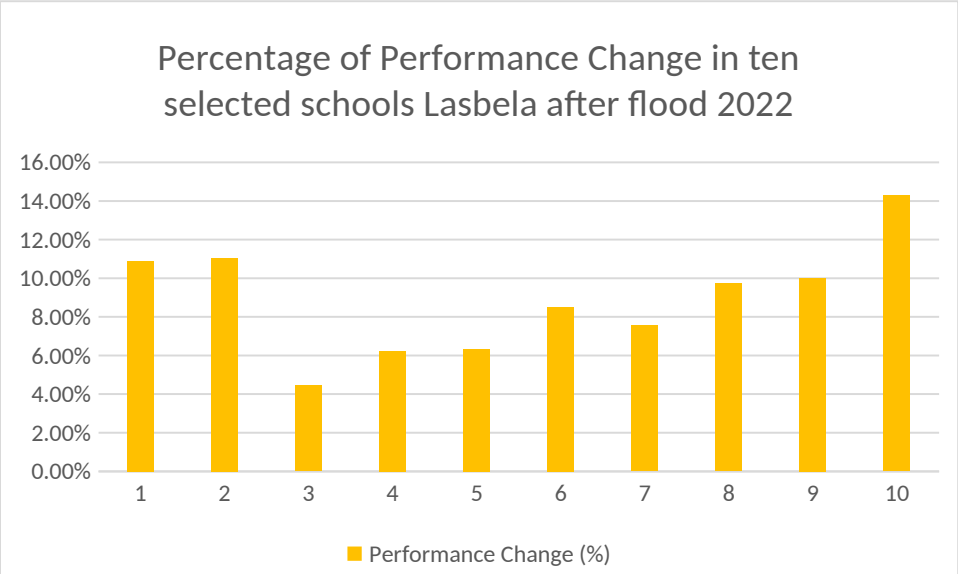

Chart 2 reveals the percentage change in performance across all ten schools immediately after the flood in lasbela.

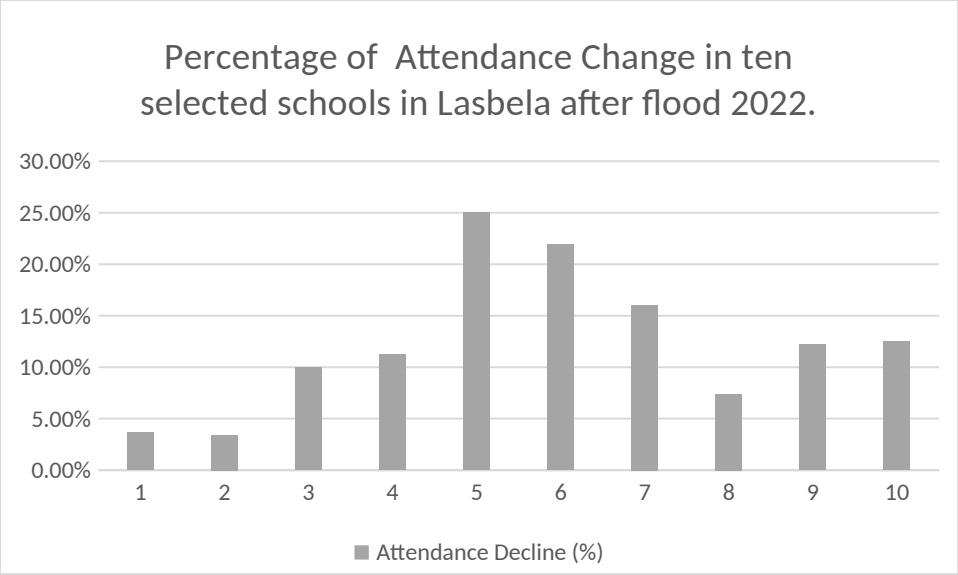

Chart 3 illustrates the percentage decline in attendance observed in each of the ten schools in Lasbela following the 2022 flood.

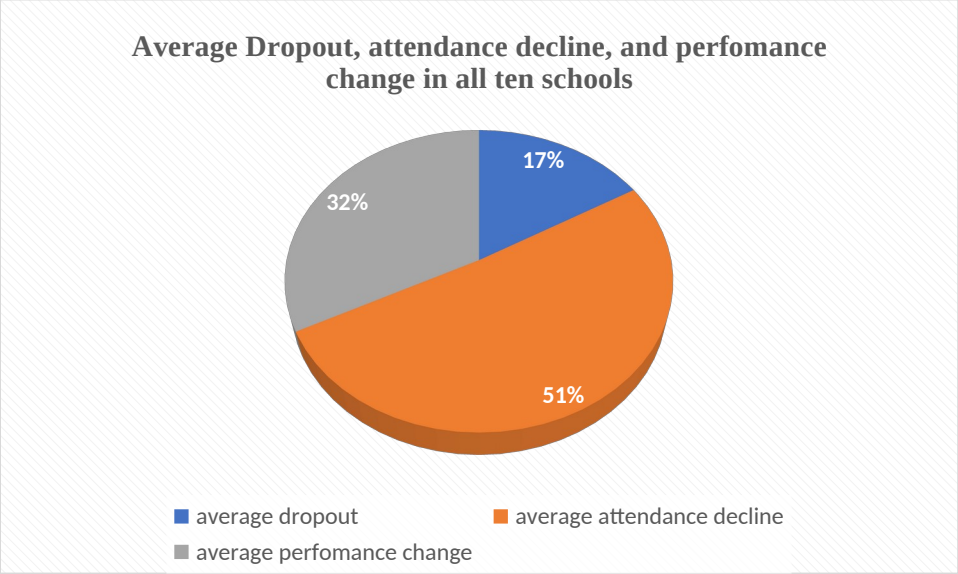

Chart 5 demonstrates that, on average across all ten schools, there was a 17% dropout rate among girls, a 32% change in performance, and a 51% decline in attendance following the 2022 flood. The primary reason behind these changes appears to be the socio-economic impact of the flood.

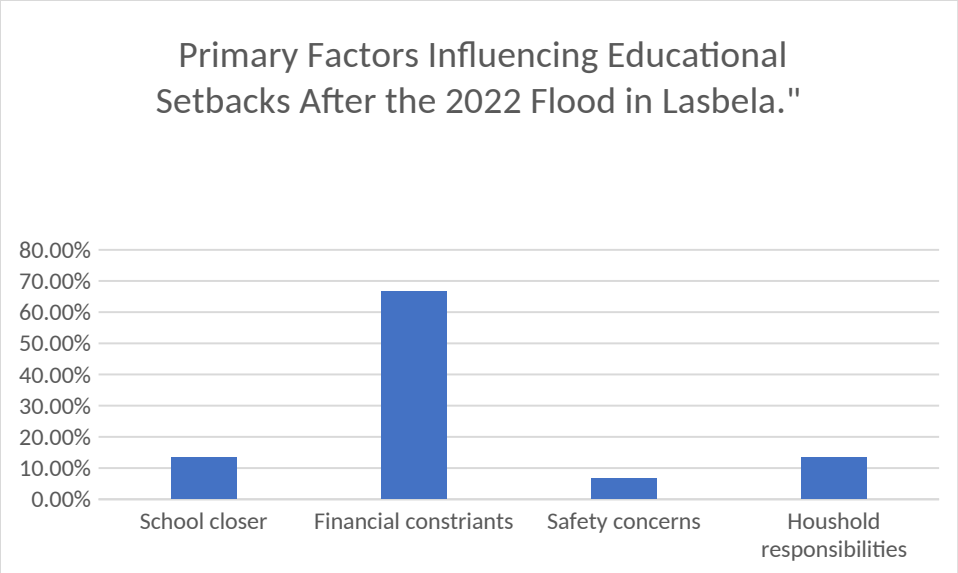

Chart 6 illustrates the factors contributing to girls' education disruption caused by the 2022 flood in Lasbela. Financial constraints emerge as the predominant factor, accounting for 68% of the disturbance. This indicates that vulnerable families faced significant challenges due to financial constraints, directly impacting girls' primary education.

7. Discussion :

Interpretation of Results:

The objective of this research was to assess the impact of climate change on the socio-economic vulnerabilities affecting girls' primary education in Lasbela. The findings reveal significant disruptions in girls' education following the 2022 flood. Across all ten schools studied, there was an average 17% dropout rate among girls, a 32% change in performance, and a substantial 51% decline in attendance.

These statistics vividly illustrate the profound effect of the 2022 flood on girls' primary education in Lasbela. The disruption in attendance, coupled with changes in performance and dropout rates, underscores the severity of the challenges faced by girls in accessing and maintaining their education in the aftermath of climate-related disasters.

Furthermore, the research identifies financial constraints as the primary contributing factor, accounting for 68% of the disturbance observed in girls' education. This indicates that the economic repercussions of climate change-induced disasters significantly exacerbate existing socio-economic vulnerabilities, particularly for families in Lasbela. The inability to cope with financial burdens resulting from the flood likely forced many families to prioritize immediate economic needs over their daughters' education, leading to increased dropout rates and diminished attendance.

In essence, these findings emphasize the intricate interplay between climate change, socio-economic vulnerabilities, and educational outcomes for girls in Lasbela. By elucidating the direct linkages between climate-induced events, financial constraints, and disruptions in girls' education, this research highlights the urgent need for targeted interventions to mitigate the adverse effects of climate change on vulnerable communities. Addressing the socio-economic factors that impede girls' access to education is crucial for building resilience and fostering sustainable development in regions like Lasbela, where climate change poses significant challenges to educational equity and attainment.

comparison with previous research:

This study's findings align with previous research that has highlighted the detrimental impact of climate change on girls' education, particularly in low-income settings. The observed 17% dropout rate among girls following the 2022 flood in Lasbela is consistent with studies documenting increased school dropout rates in the aftermath of climate-related disasters (UNICEF, 2019). Moreover, the dominance of financial constraints as the primary factor contributing to the disturbance in girls' education echoes findings from research emphasizing the socio-economic vulnerabilities exacerbated by climate change (NIH, 2023). Thus, this study's results reinforce the existing body of literature underscoring the adverse consequences of climate change on girls' primary education and the underlying socio-economic factors driving these impacts.

implications and significance of the findings:

The results of this research underscore the urgent need for comprehensive policy responses to address the socio-economic vulnerabilities exacerbated by climate change, particularly in the context of girls' primary education in Lasbela. With a staggering 17% dropout rate, a 32% decline in performance, and a significant 51% decrease in attendance following the 2022 flood, it is evident that climate-induced disasters pose a substantial threat to educational continuity for girls in the region. Moreover, the research identifies financial constraints as the predominant factor contributing to this disturbance, emphasizing the critical need for targeted interventions to alleviate the socio-economic burden on vulnerable families.

These findings highlight the inadequacy of existing policy frameworks, such as the Framework for Implementation of Climate Change Policy (2014-2030), which primarily focus on short-term initiatives like local water harvesting and curriculum integration. Without addressing the financial impacts of climate change on vulnerable families, these policies risk overlooking the root causes of educational disruption and perpetuating systemic inequalities.

The implications of this research extend beyond Lasbela, serving as a call to action for policymakers and stakeholders to prioritize climate resilience in the education sector. By integrating the findings into policy formulation and implementation processes, governments can develop more robust strategies to support girls' educational access and retention in the face of climate-induced challenges. Furthermore, the research underscores the importance of interdisciplinary collaboration between climate scientists, educators, and policymakers to ensure holistic and effective responses to climate change impacts on education.

Limitations:

• The study's scope may not comprehensively cover all aspects of climate change impacts in the region beyond the specific focus on girls' primary education.

• It primarily addresses the vulnerabilities of girls' education, potentially overlooking other vulnerable groups within Lasbela, Balochistan.

• The research is limited to specific regions affected by floods in Lasbela, potentially excluding areas with different climate change impacts.

• While data collection included visits to some flood-affected schools, not all schools impacted by the floods were covered, which may affect the representativeness of the findings.

• Qualitative data collection was limited by incomplete responses to qualitative questionnaires.

• The study's primary target audience was girls, teachers, and parents, potentially limiting perspectives from other stakeholders or community members.

8. Conclusion :

This study has shed light on the profound impact of climate change-induced floods on the socio-economic vulnerabilities affecting girls' primary education in Lasbela, Balochistan. Through a mixed-methods approach encompassing qualitative interviews, stakeholder meetings, and quantitative data collection via questionnaires, the research uncovered significant disruptions in girls' education following the 2022 flood event.

By identifying the intricate interplay between climate-induced events, socio-economic vulnerabilities, and educational outcomes for girls, this research contributes to the growing body of literature emphasizing the importance of addressing climate change impacts on education, particularly for marginalized populations. The study's implications extend beyond Lasbela, serving as a call to action for policymakers to prioritize climate resilience in the education sector and develop robust strategies to support girls' educational access and retention amidst escalating climate challenges.

9. Reference :

1. **THE HEAT IS ON!** A climate change report by UNICEF,

https://www.unicef.org/rosa/media/17996/file/The%20Heat%20is%20On!%20.pdf

2. **A greener, fairer future, Why leaders need to invest in climate and girls' education,** a report by MALALA FUND

https://www.ungei.org/publication/greener-fairer-future

3. **NCCP report on climate change updated 2023**

https://mocc.gov.pk/SiteImage/Policy/NCCP%20Report.pdf

4. **"The Impact of Climate Change on Socio-economic Vulnerabilities: Evidence from Rural Communities."**

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9915550/