

Investigating the Psychosocial Effects of Climate Change on School Going Teenage Girls: A Case Study of Lusitu Community, Chirundu, Zambia

Miyanda, M., and Phiri, G

Mulungushi University

DOI: <https://dx.doi.org/10.47772/IJRISS.2026.100300024>

Received: 25 February 2026; Accepted: 02 March 2026; Published: 24 March 2026

ABSTRACT

This study was undertaken to investigate the psychosocial effects of climate change on school-going teenage girls in Chirundu, Zambia. The aim of this study was to understand how climate-related challenges manifest in the psychological, educational, and social lives of teenage girls. The research employed a descriptive survey design using a mixed-method approach. The study was guided by four objectives: To assess psychological effects of climate change on teenage girls, examining impacts on school attendance and performance, identifying short-term social challenges, and investigating how climate change affects the social responsibilities of girls. The sample consisted of 240 school-going teenage girls aged between 13 and 19 years who were randomly selected from three schools; and a purposive sample of 12 teachers, 3 administrators were selected from the three schools. The findings revealed that psychological impact associated with climate change among girls include higher levels of stress (80%), anxiety (70%), and emotional distress (65%). Environmental disruptions like droughts and floods negatively affected school attendance and academic performance, often leading to absenteeism. Regarding social challenges related to climate change, the participants reported increased domestic responsibilities (77%). The most common coping mechanisms reported by participants include participation in climate education programs (25%). and community support initiatives (20%). The study recommended the integration of psychosocial support programs in schools, the development of climate-resilient infrastructure, gender-sensitive community awareness programs, and the inclusion of girls in decision-making processes to protect the mental health and educational access for the teenage girls.

Key words: Climate change; psychosocial effects, school performance; teenagers.

INTRODUCTION

Introduction

Climate change has been widely recognized as a major global crisis affecting various aspects of human life, including education. The concept of “psychosocial effects” refers to the interconnection between psychological and social factors that influence individuals’ mental well-being and behavior (Bronfenbrenner, 1994). Climate change, characterized by extreme weather patterns, rising temperatures, and resource scarcity, significantly disrupts learning environments. According to UNICEF (2021), climate-related disruptions such as floods, droughts, and heatwaves can lead to school closures, displacement of families, and increased household burdens, all of which negatively affect students’ mental health and academic performance. Climate change is likely to have profound effects on school-going pupils, particularly in vulnerable communities. Rising temperatures, prolonged droughts, and unpredictable rainfall patterns can disrupt the learning environment, making it difficult for students to focus on their studies. Extreme weather events, such as floods or heatwaves, may damage school infrastructure, limiting access to education. Additionally, climate-induced food insecurity and water shortages can lead to malnutrition and dehydration, negatively affecting students’ cognitive abilities and overall health (Chinyama, 2016). These challenges may contribute to higher absenteeism and lower academic performance among pupils, ultimately threatening their educational success. Teenage girls, in particular, face unique psychosocial effects of climate change.

In Africa, climate change is increasingly recognized as a major factor influencing the lives of young people, especially girls. Africa is highly vulnerable due to its dependence on climate-sensitive sectors such as agriculture and water, and the weak adaptive capacity of many of its countries. Nkrumah (2021) found that in Ghana, floods and prolonged droughts significantly reduce school attendance among teenage girls, as families struggling with economic hardships often prioritize basic survival over education. Moreover, Mugisha and Kamau (2020) studied the effects of climate change on education in East Africa and found that water scarcity forces girls to walk long distances to fetch water, reducing their available study time and making them more likely to miss school. The research also highlighted that extreme weather conditions often damage school infrastructure, making learning environments unsafe and uncomfortable for students. Research by Tschakert et al. (2019) highlights how adolescent girls in sub-Saharan Africa often bear a disproportionate burden during climate crises. These include increased domestic labor, food insecurity, and exposure to early marriage as families struggle to cope with poverty. Girls are often withdrawn from school during climate emergencies to help at home or because of resource limitations, which can cause long-term emotional trauma and social alienation. Studies in Ethiopia, Malawi, and Kenya (UNDP, 2020) have revealed similar patterns of reduced educational attainment and heightened psychological stress among girls during and after extreme climate events, underscoring the urgent need for gender-specific research on climate adaptation and mental health.

In the Southern African region, including Zambia, these climate change impacts are intensifying. According to the Southern African Development Community (SADC) Climate Services Centre (2021), the region has experienced more frequent droughts, floods, and erratic rainfall patterns over the last decade. These conditions directly affect agriculture, food security, access to clean water, and educational continuity. In Zambia, the 2018-2022 National Climate Change Response Strategy acknowledges that the country's rural communities, especially women and girls, are the most vulnerable to climate disruptions. Adolescent girls in such communities often face immense psychological strain due to the emotional toll of family stress, household responsibilities, and uncertainty about the future. The strategy calls for better data and targeted responses to address the emotional and social effects of climate change, especially in rural districts where infrastructure and mental health services are limited or nonexistent.

In Zambia climate change has continued to alter the social fabric and well-being of learners especially, in Lusitu community within the Chirundu District of Zambia. Lusitu is situated in an area frequently affected by climate-induced hazards such as seasonal floods and prolonged dry spells. Studies by Chileshe and Moonga (2019) suggest that there is correlation between climate vulnerability and education outcomes. The study on school dropouts in rural Zambia found that extreme weather conditions significantly disrupt learning among adolescent girls, often leading to permanent school exit. Girls in vulnerable households are more likely to be married off early or engaged in informal labor to support the family during drought or food shortages, contributing to emotional distress, depression, and the loss of childhood social networks. Moreover, the Ministry of General Education (2021) reported that in areas like Southern and Eastern Provinces, schools regularly experience declining female attendance during times of climatic hardship, pointing to the need for region-specific solutions.

Psychosocial effects of Climate change

Psychosocial effects refer to the interaction between psychological and social factors that influence an individual's well-being, behavior, and development (Woodward, 2015). These effects arise when individuals experience stressors that impact both their mental health and social interactions, often leading to anxiety, depression, reduced self-esteem, or difficulty in maintaining relationships. In the context of climate change, psychosocial effects can be triggered by environmental disruptions such as droughts, floods, and food shortages, which create uncertainty and distress. For school-going teenage girls, these challenges can result in emotional distress, increased household responsibilities, and limited social support, ultimately affecting their academic performance and overall quality of life. Understanding these effects is crucial in developing interventions to support their well-being and resilience.

According to Smith (2021), climate-induced stress and anxiety have been rising globally due to extreme weather events, displacement, and resource scarcity. The study found that many adolescents in climate-affected areas experience heightened levels of post-traumatic stress disorder (PTSD), depression, and general anxiety. Similarly, the World Health Organization (WHO, 2022) reported that climate change has indirect but profound

effects on the mental health of young people, particularly those in regions prone to droughts, floods, and other environmental crises. The emotional burden of witnessing destruction, economic hardship, and food insecurity can lead to persistent feelings of helplessness, which negatively impacts their academic performance and social interactions. From a continental perspective, Adeyemi (2020) examined the psychological impact of climate change on teenage girls in several African countries, including South Africa, Nigeria, and Kenya. The study found that prolonged droughts and frequent floods often lead to heightened emotional distress, which manifests in mood swings, social withdrawal, and difficulty concentrating in school. In another development, Okonkwo and Moyo (2021) highlighted that in rural African communities, the psychological burden of climate change is compounded by socio-cultural expectations placed on girls. Many teenage girls are expected to assist their families during environmental crises, leading to increased stress and reduced time for self-care and academic pursuits. The authors emphasized that climate-related disruptions create long-term psychological trauma, affecting not only the present generation but also shaping the mental resilience of future generations.

Social Challenges Faced by Teenage Girls related to Climate Change

Climate change has profound social implications for teenage girls, particularly in rural settings where gender roles are more rigidly defined. According to Jones (2022), extreme weather events often lead to increased household responsibilities for girls, reducing their time for education and social interactions. The United Nations Development Programme (UNDP, 2021) reported that as families struggle with climate-induced economic hardships, teenage girls are often expected to contribute more to household labor, including fetching water, cooking, and caring for younger siblings. These added responsibilities limit their opportunities for academic and social development, reinforcing gender inequalities. At the continental level, Adebayo and Ncube (2021) found that in many African countries, climate change exacerbates traditional gender roles, forcing girls to take on excessive domestic duties. In Nigeria and Zimbabwe, for example, climate-induced water shortages have increased the burden on girls, as they must travel long distances to fetch water, often at the expense of their schooling. Kamara (2020) noted that climate change also disrupts traditional social structures, reducing peer interactions among teenage girls. With limited time for socialization and extracurricular activities, girls experience increased social isolation, which can negatively impact their emotional well-being and self-esteem.

In many communities, when resources become scarce, girls are often burdened with additional household responsibilities, such as fetching water over long distances or taking care of younger siblings, reducing their time for studies. Economic hardships caused by climate-related crop failures may force families to prioritize boys' education over girls', increasing the risk of early marriages and school dropouts. Moreover, stress and anxiety related to climate uncertainties can have long-term psychological effects on girls, affecting their motivation and overall well-being. The constant worry about water availability, food security, and family income can lead to heightened levels of stress and anxiety among teenage girls, impacting their concentration and performance in school. In addition, inadequate sanitation facilities in schools, worsened by water shortages, can discourage girls from attending school, especially during menstruation. These challenges suggest the urgent need for interventions to support school-going teenage girls in climate-affected communities like Lusitu, ensuring that they can continue their education despite the increasing threats posed by climate change.

Statement of the problem

The psychosocial effects of climate change refer to the emotional, mental, and social challenges that arise due to environmental changes, such as extreme temperatures, droughts, and floods. Despite the growing recognition of climate change's impact on vulnerable populations, there is a significant gap in understanding its immediate psychosocial effects on school-going teenage girls in Lusitu community. The study seeks to provide empirical evidence regarding the linkages between climate change and the school performance of teenage girls in selected schools in the area. Understanding these effects will contribute to policy formulation and practical interventions aimed at supporting adolescent girls in drought/floods affected rural areas. By addressing this gap, the research will provide a foundation for developing holistic support systems and policies that ensure that climate change does not become a barrier to girls' education and overall well-being.

Objectives of the study

General objective

To investigate how climate change affects the psychosocial performance of school-going teenage girls in Lusitu, Chirundu District. The study also explored coping mechanisms, support systems and potential policy interventions that can mitigate these psychosocial impacts and enhance resilience among affected learners.

Specific objectives:

- i. To investigate the psychological effects of climate change on school-going teenage girls in Lusitu.
- ii. To examine how climate change-related disruptions (e.g., drought, floods, food and water shortages) affect the education of teenage girls in Lusitu.
- iii. Investigate how the effects of climate change influence the social responsibilities of girls.
- iv. To establish the coping mechanisms used by the teenage girls to navigate through the effects of climate change.

Research questions:

- i. What are the psychological effects of climate change on school-going teenage girls in Lusitu?
- ii. How do the effects of climate change-related impact the education of teenage girls in lusitu?
- iii. What are the effects of climate change on the social responsibilities of girls?
- iv. What are the coping mechanisms used by teenage girls to navigate through the effects of climate change?

Significance of the study

This study is of great importance as it brings attention to an underexplored area that connects climate change with the psychosocial experiences of school-going teenage girls. The study is also important because it addresses the direct impact of climate change on school attendance and academic performance among girls. The study has the potential to influence educational planning and curriculum development. The findings show that climate change is not just an environmental concern but also an educational and psychological challenge that requires a holistic response. This research lays a foundation for future academic work and practical initiatives. It encourages more in-depth studies that can explore the long-term psychosocial and educational effects of climate change on youth, especially in rural and underserved communities. It also opens the door for collaborative work between educators, mental health professionals, policymakers, and environmental experts to design multi-sectoral responses that are inclusive and sustainable.

Theoretical framework

This study was guided by Lazarus and Folkman's (1984) Transactional Model of Stress and Coping, which explains how individuals perceive and respond to stressors in their environment. This theory suggests that when individuals face stressors such as climate-induced disruptions they undergo a cognitive appraisal process to determine whether they can cope. In this respect the teenage girls experiencing stress due to climate change-related challenges, such as school disruptions and increased household responsibilities, may develop different coping mechanisms, including emotional withdrawal, reduced school engagement, or resilience-building strategies. The effectiveness of their coping strategies depends on available support systems, such as family encouragement, school interventions, and community assistance programs. (Figure 1).

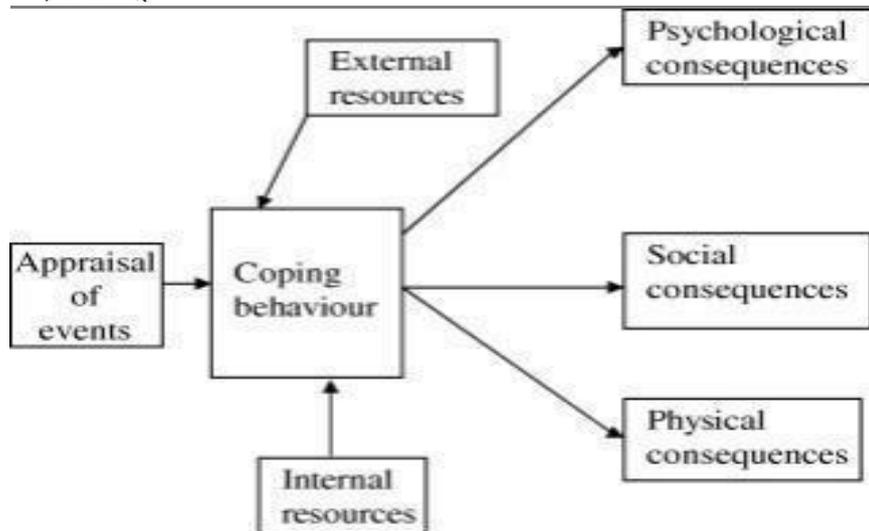


Figure 1: Transactional Model of Stress and Coping

By applying this model, the study aims to understand how teenage girls perceive climate-related stress and how their responses affect their educational and social outcomes. These theoretical perspectives provide a comprehensive framework for analyzing the psychological, academic, and social impacts of climate change on teenage girls in Lusitu.

Definition of operational terms

Climate Change – Long-term alterations in temperature, rainfall patterns, and extreme weather events that disrupt natural and social systems, affecting communities’ livelihoods, education, and mental health.

Psychosocial Effects – The emotional, mental, and social impacts that climate change has on individuals, affecting their well-being, stress levels, relationships, and ability to cope with environmental changes.

School-Going Teenage Girls – Female students aged between 13 and 19 years who are actively enrolled in school and face unique challenges due to climate change, including emotional distress, attendance issues, and increased responsibilities.

Performance – The measurable academic performance of students, including attendance, retention, and achievement levels, which may be influenced by the psychosocial effects of climate change.

METHODOLOGY

Introduction

This chapter includes the Research design, area of study, sample and sampling procedure, population of the study, Instrument for data collection, validation of instrument, method of data collection and method of data analysis.

Research Design

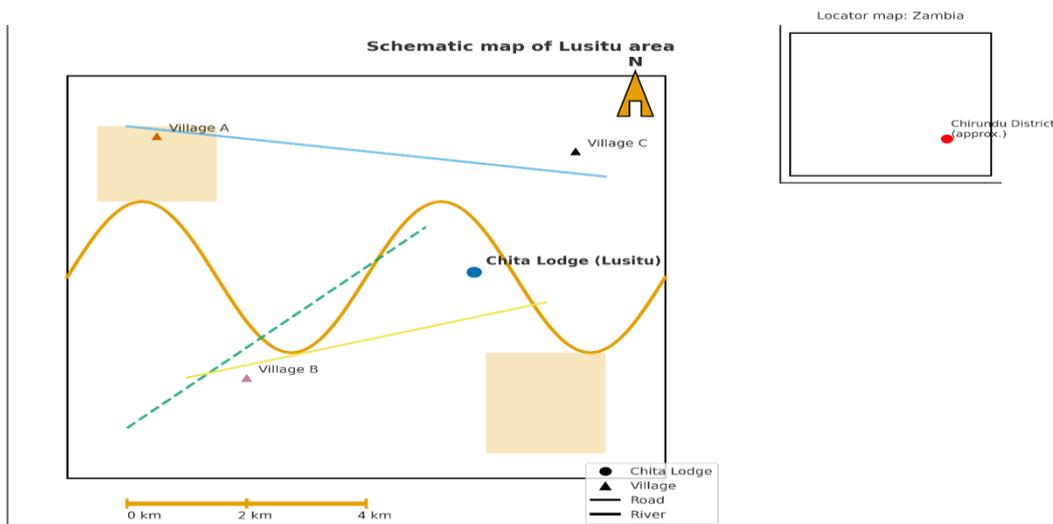
The study adopts a descriptive research design, which allows for an in-depth analysis of the impact of climate change on school-going girls in Lusitu. This design was appropriate because it enabled the researcher to systematically collect, analyze, and interpret data from respondents in their natural setting. The descriptive approach helped to establish patterns and relationships between climate change and the psychosocial well-being of teenage girls. Both qualitative and quantitative methods are employed to provide a comprehensive understanding of the research problem. Qualitative data captures personal experiences and perceptions, while quantitative data ensures measurable and verifiable results. This mixed-methods approach enhanced the study’s reliability and validity.

Study Site

The study was conducted in Lusitu, a rural area in Chirundu District, Zambia. This location was selected because of its vulnerability to climate change, particularly the frequent droughts and floods that affect the community. The area is characterized by limited access to education and resources, making it an ideal setting to investigate the challenges faced by school-going teenage girls.

Lusitu, a rural ward in Chirundu District of Zambia’s Southern Province, had a population of 8,075 as of the 2022 census, with a nearly equal gender distribution 4,010 males and 4,065 females. While specific data on the number of schools and enrollment figures in Lusitu are limited, national statistics from 2025 indicate a gross enrollment rate of 102.4% at the primary level and 45.8% at the secondary level. However, net enrollment rates were lower, at 83.6% for primary and 20.2% for secondary education, suggesting that many children, particularly at the secondary level, are not enrolled in school.

Lusitu has a significant number of school-going girls who experience climate-related disruptions. Understanding their experiences provides valuable insights into the psychosocial and educational impacts of climate change. The study site was also chosen due to its accessibility and relevance to the research objectives.



Target Population

The target population consisted of school-going teenage girls in Lusitu, aged between 12 and 18 years. This group was selected because they were most affected by climate change-related challenges, including school disruptions, increased household responsibilities, and mental health issues. Their experiences provided crucial information on how environmental changes influence their educational outcomes and well-being. Other key participants included teachers, school administrators, and parents who interact closely with the girls and can provide additional perspectives. Their input helped in understanding the broader context of climate change’s impact on adolescent girls in the community.

Sample and Sample Size

A purposive sampling technique was used to select participants who had firsthand experience with the effects of climate change. The Yamane formula was used to determine the sample size, that is, sample size is equal to, total population over 1 plus total number of population times margin of error $[n=N/1+(e^2)]$ which is 0.05 for 95% confidence level. The sample included 240 school-going teenage girls, 12 teachers, 24 boys and 3 school administrators from 3 different schools within Lusitu from a total population of about 600 females aged between 13-19. This sample size was deemed sufficient representative to provide a diverse range of perspectives while maintaining the study’s feasibility.

To ensure representation, participants were drawn from secondary school grades between 8-12 and different socioeconomic backgrounds. The selected sample allowed the study to capture both common and unique experiences, thereby improving the depth and reliability of the findings.

Sampling Procedure

The study employed a purposive sampling strategy to select participants from the three schools in Lusitu. Given the limited number of schools in the area, all three schools were included to ensure comprehensive coverage of the target population. Within each school, participants were purposely selected based on the inclusion criteria of being school-going girls aged between 13 and 18 years. This age range was chosen to capture adolescents who are most likely to experience both educational and social impacts of climate-related challenges. The purposive approach allowed the researcher to target participants who could provide relevant and in-depth insights into the study's objectives, while ensuring that the sample reflected the diversity of adolescent experiences across three schools. A total of 240 teenage girls meeting the inclusion criteria were recruited across the three schools, ensuring adequate representation of the adolescent population in Lusitu for the study.

Research Instruments

Data was collected using structured questionnaires, interviews, and focus group discussions. The questionnaire was designed to gather quantitative data on school attendance, academic performance, and psychosocial challenges. It included closed-ended questions for easy analysis and comparison. Interviews and focus groups provided qualitative insights by allowing participants to share their experiences in detail. This combination of research instruments ensured a well-rounded understanding of the research problem by capturing both statistical trends and personal narratives.

Nevertheless, instrument reliability was not quantified in this study; future studies should assess internal consistency to strengthen measurement validity.

Data Collection Procedure

The data collection involved distributing questionnaires to respondents, conducting face-to-face interviews, and organizing focus group discussions. All responses were recorded accurately, and measures were taken to ensure participant confidentiality and informed consent.

Data Analysis

Data analysis was conducted using both qualitative and quantitative techniques. Quantitative data from questionnaires was analyzed using statistical software to generate descriptive statistics such as frequencies, percentages, and correlations. This analysis helped identify patterns and relationships between climate change and the educational experiences of school-going teenage girls. Qualitative data from interviews and focus groups were analyzed using thematic analysis. Responses were to be categorized into themes that highlight key psychosocial and educational challenges. This approach allowed for a deeper understanding of participants' experiences while ensuring that findings are presented clearly and systematically.

Data presentation

The data in this study was presented using a combination of both qualitative and quantitative methods to capture the psychosocial effects of climate change on school-going teenage girls in Lusitu Community, Chirundu District. Quantitative data was collected through structured questionnaires and responses were analyzed and presented in the form of tables, charts, and graphs.

These visual representations highlighted trends such as the frequency of climate-related events (e.g., floods, droughts) and their correlation with mental health indicators like stress, anxiety, and depression among the teenage girls. Statistical analysis was conducted to identify patterns and relationships within the collected data.

Qualitative data, on the other hand, was gathered through in-depth interviews and focus group discussions with teenage girls, community leaders, and educators. This data was analyzed thematically to identify key psychosocial challenges faced by the girls as a result of climate change, such as displacement, loss of educational opportunities, or family stress. The findings were presented through direct quotes, categorized themes, and

descriptive narratives to provide a deeper understanding of how climate change impacts the mental and emotional well-being of the participants.

Validity and reliability of instrument

To ensure the validity of the research instruments, the questionnaire and interview guide were pre-tested with a small group of respondents before the actual data collection. This pilot study helped identify any unclear or biased questions and allowed for necessary adjustments. Expert opinions from education and psychology professionals were sought to enhance face validity of the research instruments. Reliability was maintained by standardizing data collection procedures and ensuring that the researchers were skilled in conducting interviews and administering questionnaires.

Ethical clearance

This study involved teenage girls, a population considered vulnerable due to their age and social position. Therefore, strict ethical procedures were followed to ensure the protection, dignity, and wellbeing of all participants. Prior to data collection, informed consent was obtained from parents, guardians, and the teenagers before participating in the study. Participants were clearly informed about the purpose of the study, the nature of the questions and their right to withdraw at any time. The study emphasized voluntary participation and ensured that no respondent was coerced into participating.

To protect participants' identities, no names or identifying information were recorded on the questionnaires. Responses were kept confidential and used strictly for academic purposes. Data was securely stored and accessed only by the researcher. Findings are presented in aggregated form to prevent identification of individual participants or schools.

The study explored climate-related social and psychological challenges, including potential vulnerabilities such as early marriage or transactional relationships. Therefore questions were framed sensitively and non-judgmentally. Participants were not required to disclose personal experiences beyond their comfort level. Where responses suggested emotional distress, participants were treated with care and respect. The researcher ensured a safe environment during data collection to minimize psychological discomfort among the participants.

Finally, ethical clearance for this study was sought and obtained from educational and administrative authorities, including the school administrations and the local District Education Office in Chirundu.

RESULTS

Introduction

The data were gathered using structured questionnaires that included both open- and closed-ended questions. The responses were grouped and analyzed according to the four study objectives. The findings are presented using tables and charts to illustrate the key trends among the factors. The analysis focuses on how teenage girls were psychologically, socially, and academically affected by climate change.

Psychological Effects of Climate Change on School-going Teenage Girls in Lusitu area.

This section addressed how climate change had psychologically affected teenage girls in Lusitu area. The teenage girls were requested to respond to the following questions:

1. Have experienced any climate-related disruptions in you environment like droughts, floods, temperature changes? Yes No
2. If "yes" how did you feel during or after the climate-related disruptions? (Tick all that apply)
 - o Stressed ; Anxiety; Fearful ; Helplessness; other

Table 4.1: Psychological Effects of Climate Change Reported by Teenage Girls (n = 240)

Psychological Effect	Frequency	Percentage (%)
Stress	192	80%
Anxiety	168	70%
Fear of the future	156	65%
Emotional breakdowns	113	47%
No major psychological impact	48	20%

The findings show that a majority of respondents experienced psychological distress resulting from climate change. Out of the 240 teenage girls surveyed, 192 (80%) reported high stress levels, 168 (70%) experienced anxiety, and 156 (65%) expressed fear for their future. Emotional breakdowns were reported by 113 (47%) of the participants, while only 48 (20%) indicated that they had not experienced any major psychological impacts.

These findings suggest that recurring environmental disruptions due to climate changes like droughts and excessive heat affect the emotional wellbeing of school-going girls. The respondent reported high levels of stress, anxiety and fear following experiences of drought.

Climate Change-related Disruptions and its effect on School Attendance and Performance among Teenage Girls in Lusitu.

To assess the educational consequences related to climate change the respondents were asked to indicate their opinion regarding how climate change has influenced their performance. The questions covered issues on how disruptions such as droughts, floods, and resource shortages had influenced school attendance, concentration in class, and academic performance. Some questions asked in this respect included the following:

1. Can you describe how climate change has affected your school attendance?
2. Has your performance in school changed due to these challenges? (If so how?)

The results are reflected in figure 3 below:

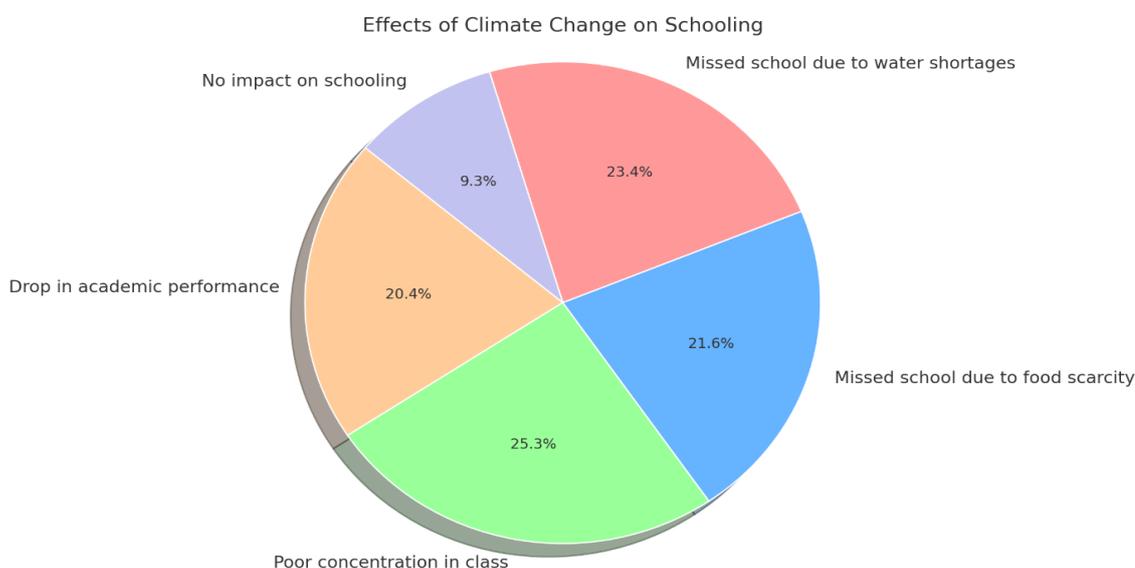


Figure 3: Climate Change-related Disruptions and effects on performance and school attendance.

In order to assess the effects of climate change on school attendance among the teenage girls, the participants were asked to indicate their opinion regarding how climate change has influenced their education. The questions covered issues on how disruptions such as droughts, floods, and resource shortages had influenced school attendance, concentration in class, and academic performance. Figure 3 indicates that 63 (25.3%) of the girls experienced challenges over concentration in class, and 49 (20.4%) experienced a decline in their academic performance. In addition, 56 (23.4%) of the teenage girls reported missing school frequently due to water shortages, while 52 (21.6%) had to stay home because of food scarcity. The results suggest that environmental disruptions have a direct negative impact on education.

Social Challenges (e.g. Increased Household Responsibilities and Reduced Peer Interactions) that Teenage Girls Experience due to Climate Change

These included issues pertaining to responsibilities at home, limited interaction with peers, and reduced time for leisure or personal care. The teenage girls were asked to indicate the social challenges they faced in their daily lives as a result of climate change.

Example of questions asked included the following:

- Have your household responsibilities increased due to climate change? If so, how?

Table 4.2: Social Challenges related to Climate Change among teenage girls (n = 240)

Social Challenge	Frequency	Percentage (%)
Increased household responsibilities	185	77%
Reduced peer interaction	161	67%
Limited time for leisure	151	63%
Feelings of isolation	115	48%
No social challenge experienced	55	23%

The findings showed that 185 (77%) of the respondents were taking on increased domestic responsibilities, such as caring for siblings and fetching water, especially during climate-related emergencies. Moreover, 161 (67%) reported reduced time spent with friends, and 151 (63%) lacked time for rest and personal development. Feelings of isolation were recorded by 115 (48%) of the girls. These changes reflected the way climate change had restructured daily routines and social roles. Many girls explained in the open-ended responses that due to climate-induced poverty and stress at home, they were expected to contribute more to household duties, often at the expense of their personal and academic lives.

Climate Change and Reported Social Responsibility of Teenage Girls

This section examined how climate change had influenced the sense of social responsibility among school-going girls. It considered their involvement in family duties, community tasks, and personal leadership in climate-related crises.

Figure 4.2 shows How Climate Change Effects Affected the Social Responsibility of Teenage Girls

Number of Respondants vs.

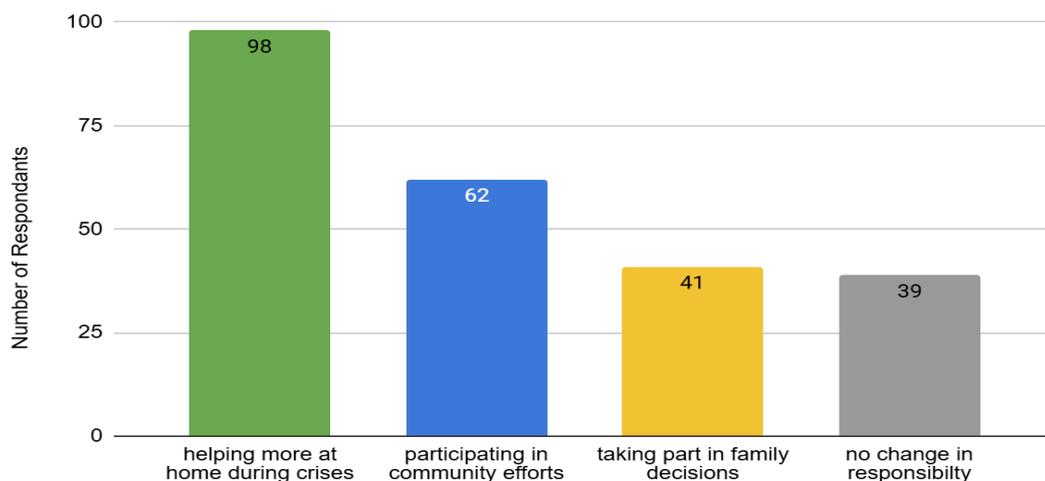


Figure 4. How Climate Change affect the Social Responsibility of Teenage Girls

The bar chart presented above illustrates the changes in social responsibility experienced by teenage girls in Lusitu due to climate change. The most frequently reported shift was an increased role in helping more at home during crises, with 98 out of 240 respondents (approximately 72%) indicating that they were more involved in domestic duties during climate-related events such as droughts or food shortages. This was followed by participating in community efforts, reported by 62 girls (45%), suggesting that climate disruptions also demanded communal engagement where girls contributed to activities like fetching water, helping the elderly, or cleaning the environment.

These roles point to a growing expectation for girls to assume practical and active roles in their communities amidst environmental stress. However, fewer girls indicated that they were taking part in family decisions (41 respondents or 30%), highlighting that while their physical contributions increased, their influence in decision-making remained limited. Additionally, 39 girls (28%) stated that they experienced no change in responsibility, showing that some families still shielded girls from added pressure, or had limited adaptive shifts in roles. Overall, the data suggest that climate change led to an increase in the social burden placed on girls without a corresponding increase in empowerment or decision-making authority. This imbalance points to the need for interventions that not only distribute household and community responsibilities fairly, but also enhance the voice and leadership of girls in climate adaptation strategies.

Coping Mechanisms Employed by Teenage Girls in Response to Climate Change

The findings revealed that the most prominent coping strategy used by school-going girls in Lusitu community is participation in climate education programs (25%) and support initiatives closely (20%). These programs are often delivered through Non-Governmental Organisations (NGOs). The local education institutions and NGOs, empower girls with knowledge on sustainable practices and build psychological resilience. (Table 4) suggesting a strong role of social structures such as school clubs, peer networks, in buffering the psychological stress caused by climate change.

Table 4.3: Coping Mechanisms used by teenage girls (N=240) in Response to Climate Change

Coping Mechanism	Frequency	Percentage (%)	Description
Climate Education Programs	60	25%	Participation in climate awareness programs and sustainable farming clubs.

Community Support Initiatives	48	20%	Engagement in school clubs and NGO programs like World Vision IMPACT+.
Traditional Coping Strategies	36	15%	Use of indigenous knowledge and changes in livelihood activities.
Early Marriage	36	15%	Girls married off early due to household economic hardship.
Transactional Sex	24	10%	Girls engaging in sex for money or goods to support family needs.
Religious and Spiritual Practices	24	10%	Seeking comfort and answers through faith or traditional rituals.
Family and Community Support	12	5%	Relying on family, teachers, or peers for emotional or material support.
Total	240	100%	

However, some coping mechanisms among the teenage girls are maladaptive. They include early marriage (15%) and transactional sex (10%). These strategies not only affect their psychological well-being but also hinder their academic progress and long-term development.

DISCUSSION

This study explored the psychosocial effects of climate change on school-going teenage girls in Lusitu Community. The findings of the study are discussed in relation to the existing literature on the subject.

Psychological Effects of Climate Change on School-going Teenage Girls in Lusitu

In Table 4.1, the findings indicate a high prevalence of psychological distress among teenage girls as a result of climate change. With 80% reporting stress, 70% experiencing anxiety, and 65% expressing fear about the future, the data suggests that climate-related environmental changes are not only physical phenomena but also significant mental health stressors. The high levels of stress and anxiety may be linked to recurring environmental disruptions such as drought and extreme heat, which can affect household stability, food security, academic performance and daily routines. The finding further highlights the gendered nature of climate change impacts. In rural Zambia most communities tend to restrict girls to domestic responsibilities to ensure household needs for survival can be met. Such responsibilities are more likely to increase under experiences of climate change like drought as the girls have to walk long distances in search of water. This increases their exposure to stressors compared to boys, who may not shoulder equivalent domestic responsibilities. Lusitu’s vulnerability to recurrent droughts and extreme heat intensifies these psychological effects. For school-going teenage girls, reduce study time and create uncertainty about educational continuity and future opportunities.

Furthermore, the findings that 47% reported emotional breakdowns highlights the intensity of psychological strain experienced by nearly half of the participants. This suggests that climate change impacts extend beyond mild concern and may contribute to deeper emotional vulnerability. Although 20% indicated no major psychological impact, this minority does not outweigh the significant proportion experiencing distress, the data therefore demonstrates that climate change is a substantial psychosocial issue among teenage girls in the study area. The findings reflect Clayton et al. (2017), sentiments that climate-induced events such as natural disasters, heatwaves, and prolonged droughts can cause deep psychological distress, including anxiety, depression, and post-traumatic stress, particularly among youth. Therefore, participants who experience climate variability are more likely to have higher stress and anxiety, and depressive symptoms due to uncertainties linked to extreme weather events, crop losses, and family displacement.

These results emphasize the need for integrated interventions that address not only environmental sustainability but also mental health support systems in schools and communities. Limited access to social services and mental health support may further compound the distress experienced by school-going girls.

Climate Change-related Disruptions and how it affects School Attendance and Performance Among Teenage Girls in Lusitu.

The findings in Figure 3 revealed that the major consequences of climate change included missing school frequently (23.4%) due to water shortages, while 21.6% had to stay home because of food scarcity. Poor nutrition and long hours spent helping at home may lead to fatigue and reduced learning capacity among the teenage girls. Some respondents explained in open-ended sections that school became less of a priority when their families were dealing with survival challenges. In addition the results showed that environmental disruptions such as droughts and floods have negatively affected school attendance and academic performance, often leading to absenteeism and reduced concentration in class.

These findings are similar to Chileshe and Moonga (2019) who reported that school dropouts in rural Zambia tend to be high under extreme weather conditions as they significantly disrupt learning among adolescent girls, often leading to permanent school exit. In addition, girls in vulnerable households are more likely to be married off or engaged in informal labor to support the family during drought or food shortages. This can increase emotional distress, depression, and the loss of social networks among the teenagers. Prolonged droughts, floods, food and water shortages are more likely to cause frequent absenteeism, with some girls missing school in order to search for water, cope with hunger, or handle domestic responsibilities. Absenteeism may reduce concentration in class, lower motivation, and lead to declining academic performance. Overall, the results demonstrate that climate change poses a significant threat to educational continuity and academic achievement among teenage girls.

Social Challenges related to Climate Change among teenage girls

Table 4.2 reveals that climate change has significantly altered the social experiences of teenage girls. A substantial majority 77% reported increased household responsibilities. This suggests that climate-related hardships such as water shortages and food insecurity may shift domestic burdens on girls, limiting their time for academic and personal development.

Furthermore, 67% indicated reduced peer interaction, while 63% reported having limited time for leisure activities. These findings highlight how environmental stressors may disrupt normal adolescent socialization patterns, potentially affecting emotional development and social bonding. Nearly half of the respondents, 48% expressed feelings of isolation. This is particularly concerning, as social isolation during adolescence can negatively affect mental health and self-esteem. The overlap between reduced peer interaction and feelings of isolation also suggests a strong connection between climate stressors and psychosocial wellbeing.

Only 23% reported experiencing no social challenges, indicating that the majority of participants were socially affected in some capacity. Overall, the results demonstrate that climate change extends beyond environmental and economic impacts, significantly influencing the social lives and developmental experiences of teenage girls. These findings underscore the need for community-based support systems and gender-sensitive climate adaptation strategies.

Climate Change and social responsibility effects among teenage girls

Regarding the link between climate change and social responsibility, the social impacts formed another critical outcome of the study according to Figure 4. Teenage girls often carried adult-like responsibilities during climate crises, including household chores, caregiving, and resource gathering. These duties reduced opportunities for social interaction and personal development, while decision-making power within families remained limited. Girls were thus burdened with heavy responsibilities without empowerment, leading to feelings of isolation, helplessness, and low self-worth. The results suggest the teenage girls affected by climate change such as drought

reported intensified gender inequalities, disrupted education, and strained psychosocial wellbeing, underscoring the urgent need for gender-sensitive support systems and climate adaptation strategies.

Furthermore, the study also highlighted various short-term social challenges the girls faced, including increased household responsibilities and reduced peer interaction, which in turn affected their social development and sense of belonging. Lastly, the chapter demonstrated that the girls' sense of social responsibility has been altered by climate change, with many having to prioritize family duties over personal growth and education. Data was presented through tables, pie charts, and bar graphs, accompanied by thorough analyses to give a clear picture of the emerging patterns and implications of climate change in the daily lives of teenage girls in Lusitu.

Strategies for Coping with climate change among the teenage girls:

The study revealed in Figure 4.3 that the most prominent coping strategy used by school-going girls in Lusitu community is participation in climate education programs (25%). The girls participate in programs delivered through Non-Governmental Organisations (NGOs) and local education institutions that empower girls with knowledge on sustainable practices and build psychological resilience. However some coping skills among the teenage girls are negative; they include early marriages.

Traditional coping strategies (15%), religious practices (10%), and family/community support (5%) also serve as mechanisms, albeit with varying effectiveness. While some of these offer emotional relief, others may not directly address the root psychological issues or educational setbacks caused by climate change. The data indicates a need for strengthening positive interventions and reducing reliance on harmful responses through targeted support and inclusive policy responses.

Other coping strategies include community support initiatives that exert a strong role through school clubs, peer networks, and NGOs in buffering the psychological stress caused by climate change. However, some coping mechanisms tend to be maladaptive. They include engaging in early marriages and transactional sex. These strategies expose the girls to vulnerability for exploitation. Such strategies not only affect their psychological well-being but also hinder their academic progress and long-term development. Other coping strategies include engaging in religious practices and family/community support. Whereas these strategies may offer emotional relief, others may not directly address the root psychological issues or educational setbacks caused by climate change. The findings suggest a need for strengthening positive interventions, support initiatives and inclusive policy responses.

CONCLUSION AND RECOMMENDATIONS

Conclusion

This study explored the psychosocial effects of climate change on school-going teenage girls in Lusitu Community. The findings revealed that climate change was not only an environmental issue but also a pressing challenge affecting the mental, educational, and social wellbeing of adolescent girls. Many participants reported experiencing stress, anxiety, and depressive symptoms resulting from uncertainties linked to extreme weather events, crop losses, and family displacement. These psychological burdens highlighted the vulnerability of girls to climate instability.

The study further revealed that climate change significantly disrupted girls' education. Prolonged droughts, floods, food and water shortages led to frequent absenteeism, as some girls missed school to search for water, cope with hunger, or manage domestic responsibilities. As a result, many experienced reduced concentration in class, lowered motivation, and declining academic performance. In severe cases, some girls temporarily or permanently dropped out of school, contributing to long-term academic setbacks and higher dropout rates.

Another critical outcome of the study was the Social impacts of climate change. The teenage girls often carried adult-like responsibilities during climate crises, including household chores, caregiving, and resource gathering. The increased responsibilities related to climate change and its consequences reduced the opportunities for social interaction and personal development among the teenagers. Girls were burdened with many domestic

responsibilities leading to feelings of high levels of stress, helplessness, and low self-worth. These developments tend to be associated with disrupted education, and strained the psychosocial wellbeing of girls, underscoring the urgent need for gender-sensitive support systems and climate adaptation strategies.

The findings suggest that climate change can influence the psychological wellbeing of the teenagers. Climate change can lead to high levels of stress, anxiety, and emotional fatigue among adolescent girls. School attendance and academic performance of the teenage girls can be adversely affected due to climate-induced disruptions like water shortages, food insecurity, and household burdens. Social challenges such as increased domestic responsibilities and limited peer interactions are likely to influence girls' social growth and emotional wellbeing.

Recommendations

There tends to be psychosocial effects of climate change on school-going teenage girls in Lusitu community. Climate Change affects school attendance and social factors of the teenage girls. The teenage girls report increasing social responsibility as they spend time to meet the basic needs of the family at the expense of their school attendance. Based on the findings the study recommended the following:

Considering that 77% of the teenage girls reported increased household responsibilities, policies should prioritize water access infrastructure and community resource distribution to reduce domestic burdens on girls. Regarding social interactions, since 67% experienced reduced peer interactions and 48% reported isolation, schools should implement psychosocial support programs and safe peer engagement initiatives.

Given that educational disruptions and poor concentration were prominent, integrating climate resilience strategies within school systems (e.g. feeding programs, water storage facilities) becomes essential. Finally, provide Climate Education and Life Skills Training for the teenagers: Curriculum developers should incorporate practical climate change education into the school syllabus to facilitate increased adaptive skills that can empower teenagers to manage psychosocial effects of climate change to improve their wellbeing.

REFERENCES

1. Adger, W. N. (2019). *Climate change, human well-being, and insecurity: The social dimensions of environmental risk*. Cambridge University Press.
2. Adegboye, T., & Nwosu, K. (2020). Climate change and mental health of schoolgirls in West Africa. *African Journal of Environmental Studies*, 18(4),
3. Arbuthnott, K., & Hajat, S. (2020). The health effects of climate change: Impacts on mental and physical well-being. *Journal of Environmental Psychology*, 70, 101449.
4. Berry, H. L., Bowen, T. (2019). Climate change and mental health: Risks, impacts, and responses. *International Journal of Environmental Research and Public Health*, 16(12), 2257.
5. Bongaarts, J. (2022). Climate change and the future of global population dynamics *Population and Development Review*, 48(1), 1-30.
6. Chibwe, M., & Banda, C. (2022). Emotional well-being of teenage girls in rural schoo under climate stress. *Zambia Journal of Social Sciences*, 10(2), 78-95.
7. Clayton, S., & Manning, C. M. (2018). *Psychology and climate change: Human perceptions, impacts, and responses*. Academic Press.
8. Cook, J., Oreskes, N (2020). Consensus on climate change: A scientific approach to understanding global warming. *Nature Climate Change*, 10 1-6.
9. Doherty, T. J., & Clayton, S. (2021). The psychological impacts of climate change on adolescents: A review and conceptual framework. *Clinical Psychology Review*, 87, 102078.
10. Ebi, K. L., & Semenza, J. C. (2018). Climate change and health risks: Addressing vulnerabilities through adaptation strategies. *Environmental Health Perspectives*, 126(9),095001.
11. Francis, D., & Webster, P. J. (2022). Extreme weather events and their effects on education systems in Africa. *Climate Risk Management*, 3, 100382.
12. Gifford, R. (2020). The dragons of inaction: Understanding and overcoming psychological barriers to climate action. *American Psychologist*, 75(1), 30-43.

18. Hulme, M. (2019). *Why we disagree about climate change: Understanding controversies inaction, and opportunity*. Cambridge University Press.
19. Intergovernmental Panel on Climate Change (IPCC). (2021). *Climate change 2021: The physical science basis*. Cambridge University Press.
20. Kalkstein, L. S., & Greene, S. (2020). Health and climate change: Examining the linkages. *Environmental Research*, 185, 109420.
21. Kjellstrom, T., & McMichael, A. J. (2018). Climate change and human health: Global risks and responses. *Annual Review of Public Health*, 39, 171-188.
22. Kumar, P. (2020). Floods and educational disruption: A case study in South Asia. *International Journal of Climate Studies*, 5(1), 33-49.
23. Leiserowitz, A., N. (2020). Climate change risk perception and communication. A
24. Psychological approach. *Nature Climate Change*, 10(7),
25. McMichael, A. J., & Lindgren, E. (2021). Climate change and human health:
26. Implications for future generations. *The Lancet*, 398(10304),
27. Moser, S. C., & Ekstrom, J. A. (2019). Toward a deeper understanding of climate change
28. adaptation: Insights from psychological research *Global Environmental Change*, 58, 101999.
29. Moyo, T (2019). The effects of drought on school attendance in Southern Africa.
30. *African Journal of Education and Development*, 14(3), 102-118.
31. Mwale, L. (2021). Water scarcity and its impact on teenage girls' school performance in
32. Zambia. *Journal of African Development*, 20(2), 55-72.
33. Ochieng, J., & Wanjiru, H. (2022). Social challenges faced by adolescent girls due to
34. Climate change in East Africa. *Journal of Gender and Climate Change* 7(1), 112-130.
35. Stern, N. (2020). *The economics of climate change: The Stern review revisited*. Oxford
36. University Press.
37. UNESCO. (2022). *Leave No Girl Behind in Education*. Paris: UNESCO.
38. UNICEF. (2021). *The impact of climate change on children's education and well-being:*
39. *A global perspective*. United Nations Publications.
40. Woodward, K (2015). *Psychosocial Studies: An Introduction*. New York, NY: Routledge.