

LIVING WITH SCARCITY: CHALLENGES AND DAILY EXPERIENCES OF WATER SHORTAGE AMONG STUDENTS IN BARANGAY ASBANG**Cristiel Joy D. Gore**Orcid Id - <https://orcid.org/0009-0001-1889-8299>

Student, Department of Arts and Sciences, UM Digos College

Ryan James TucoOrcid Id - <https://orcid.org/0009-0000-8773-8451>

Instructor, Department of Arts and Sciences, UM Digos College

ABSTRACT

Water scarcity continues to affect many rural communities, influencing not only environmental conditions but also the daily lives of students. This study used a descriptive-qualitative approach to examine the challenges and experiences of students in Barangay Asbang who regularly face water shortages, focusing on how this condition shapes their routines, well-being, and school responsibilities. Guided by Maslow's Hierarchy of Needs, the study emphasizes that water is a basic need necessary for maintaining health, hygiene, and focus in learning. Five Senior High School participants aged 17–18 were selected through purposive sampling, all of whom have lived in the community for at least three years and have experienced recurring water scarcity. Data were collected through Key Informant Interviews and analyzed using thematic analysis. The findings show that students experience limited access to safe water, long distances in fetching water, physical exhaustion, and time constraints that affect their school preparation and attendance. Water scarcity also influences their hygiene and creates emotional stress. Despite these conditions, students manage by using alternative water sources, reusing water, and collecting rainwater when available. The study highlights the need to improve water systems and strengthen local support to ensure consistent access to safe water and support students' daily lives and education.

Keywords:

Water Scarcity, Students, Daily Challenges, Coping Strategies, Rural Communities

INTRODUCTION

Water scarcity has become a serious concern in many communities, especially in areas where water supply is limited or irregular. When water resources are not sufficient to meet the needs of a population, everyday activities such as drinking, cooking, bathing, and sanitation can be affected. Access to safe and reliable freshwater remains a challenge in many places due to limited water availability, inadequate infrastructure, and insufficient financial or political support for water systems (Pontius & McIntosh, 2024). In communities experiencing frequent water shortages, households may rely on alternative sources that are not always safe or easily accessible. Because water plays an essential role in maintaining health, hygiene, and daily living, limited access can significantly affect the well-being of individuals and families within the community.

Within this context, water scarcity also has important implications for students whose daily routines and educational experiences depend on access to water. Limited water supply can disrupt hygiene practices, daily preparations for school, and students' ability to focus on their academic responsibilities. Studies have shown that water scarcity may contribute to stress, absenteeism, and difficulties in maintaining proper hygiene among students (Nkumbesi et al., 2025). Access to safe water and sanitation is also essential for community development and public health, yet many municipalities continue to face challenges in delivering sustainable and reliable water services (Bazaanah & Mothapo, 2024). In some communities, households rely on unsafe water sources such as peat river water for activities like bathing and washing, which increases the risk of infectious skin diseases and other health concerns (Nawan et al., 2023). Water scarcity can also place vulnerable groups at greater risk, particularly women and children who often travel long distances to collect water, affecting their health, hygiene, and schooling (Zahan, 2022). In addition, water shortages have been associated with psychological stress and emotional strain among community members experiencing water insecurity (Seretlo-Rangata et al., 2025). To cope with these challenges, households often develop strategies such as storing water, reusing it for multiple purposes, purifying available sources, and collecting water from distant locations (Azupogo et al., 2023).

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Despite the growing body of literature on water scarcity, most existing studies primarily focus on household water management, public health outcomes, environmental sustainability, and community-level water insecurity. While these studies provide important insights into the broader consequences of limited water access, they often overlook the lived experiences of students who must navigate water scarcity while fulfilling educational responsibilities. Existing research frequently examines water scarcity from the perspectives of households or communities, with limited attention given to how students experience disruptions in their daily routines, academic engagement, personal hygiene, emotional well-being, and school participation. In Barangay Asbang, where recurring water shortages remain a persistent challenge, there is a lack of localized qualitative evidence that captures students' personal experiences and coping mechanisms. This study addresses this gap by exploring the challenges, impacts, and adaptive strategies of students living in a water-scarce environment, thereby contributing contextualized insights into the intersection of environmental conditions and educational well-being.

Anchored in Maslow's Hierarchy of Needs, this study recognizes that water is a fundamental physiological need essential for human survival and functioning. Maslow (1943) explains that basic needs such as food, water, and shelter must first be satisfied before individuals can effectively focus on higher-level needs such as learning, achievement, and personal development. In the context of this study, limited access to water may create disruptions in students' routines, hygiene practices, and overall well-being, which may influence their ability to concentrate on academic responsibilities. Guided by this theoretical perspective, this study aims to explore the challenges experienced by students due to water scarcity in Barangay Asbang, examine the coping strategies they employ to manage water shortages, and understand how living in a community with limited water resources affects their daily experiences and educational engagement.

OBJECTIVES

This study aims to explore the challenges and lived experiences of students regarding water scarcity in Barangay Asbang and to examine its impact on their daily lives. Specifically, this study aims to answer the following questions:

1. What are the challenges of students regarding water scarcity in Barangay Asbang?
2. What are the impacts of water scarcity on the daily lives of students in Barangay Asbang?
3. What coping strategies do students use to manage the challenges caused by water scarcity?

METHODOLOGY

This study employed a descriptive-qualitative research design to explore the challenges and lived experiences of students affected by water scarcity in Barangay Asbang. A purposive sampling technique was used to select five (5) participants who qualified based on the following criteria: (1) they were 17–18 years old; (2) they were currently enrolled in Senior High School; (3) they had continuously lived in Barangay Asbang for at least three (3) years; (4) they had personally experienced recurring or prolonged water shortages that affected their daily routines, academic tasks, personal hygiene, or household responsibilities; and (5) they were able to clearly describe and reflect on their experiences related to water scarcity. The selected participants were considered appropriate because they possessed direct experiences relevant to the phenomenon being investigated. The researcher collected the data through the Key Informant Interview (KII) method, which allowed for a more in-depth exploration of the research questions. Each interview lasted approximately 25–30 minutes, during which informed consent was discussed, secured, and maintained, along with confidentiality and anonymity. Data collection continued until saturation was achieved, wherein no new information or themes emerged from the participants' responses. To ensure trustworthiness, consistent interview procedures were followed, transcripts were carefully reviewed, and interpretations were grounded on the participants' narratives. After the data-gathering process, transcription commenced, and thematic analysis was employed as the primary qualitative data analysis method. The researcher first reviewed the transcripts repeatedly to become familiar with the data, identified and coded significant statements, grouped similar codes into categories, and developed broader themes that represented the participants' experiences. The identified themes were then interpreted and supported by participant responses and relevant literature to determine the challenges, coping strategies, and impacts of water scarcity on students' daily lives.

RESULTS AND DISCUSSION

The emergent themes generated from the data analysis were based on the participants' responses regarding their experiences with water scarcity in Barangay Asbang. The findings revealed several challenges faced by students, including limited access to safe water, physical exhaustion from fetching water, time constraints that affect their

academic responsibilities, emotional stress, and limited support from local institutions. Participants also shared the different impacts of water scarcity on their daily lives, such as disrupted routines, hygiene and health difficulties, problems with school attendance and punctuality, and physical and emotional fatigue. Despite these struggles, students showed resilience by finding ways to cope, such as using alternative water sources, reusing water for household purposes, and collecting rainwater during the rainy season. These findings showed the significant effects of water scarcity on students' daily lives, well-being, and educational experiences. Specifically, the following themes for each research question are presented and discussed in detail below.

Research Question	Emergent Theme	Key Finding
Challenges of Students Regarding Water Scarcity	Lack of Access to Safe Water	Limited and unreliable access to safe water affects daily needs and well-being.
	Distance and Physical Strain	Water collection requires significant physical effort and causes fatigue.
	Time Constraints and Academic Interference	Water collection reduces time for study, rest, and school preparation.
	Stress and Emotional Strain	Water scarcity creates anxiety, frustration, and emotional burden.
	Limited Institutional Support	Inadequate institutional assistance contributes to persistent water insecurity.
Impacts of Water Scarcity on Daily Lives	Disrupted Daily Routines	Daily activities become more difficult and time-consuming.
	Hygiene and Health Challenges	Limited water access affects hygiene practices and health.
	School Attendance and Punctuality	Water collection responsibilities contribute to lateness and absenteeism.
	Physical and Emotional Fatigue	Students experience exhaustion and emotional stress.
Coping Strategies of Students Facing Water Scarcity	Alternative Water Sources	Students rely on rivers, wells, and other available sources.
	Reusing Water	Households maximize limited water through reuse practices.
	Rainwater Collection	Rainwater is collected and stored to supplement household needs.

(Table 1 presents a summary of the themes generated from the thematic analysis.)

Challenges of Students Regarding Water Scarcity in Barangay Asbang.

Water scarcity remains a significant concern among students in Barangay Asbang, influencing various aspects of their daily lives, well-being, and educational experiences. The thematic analysis identified five major challenges associated with limited water access:

Lack of Access to Safe Water. Access to safe and clean drinking water remains a significant challenge for students in Barangay Asbang. The findings revealed that water sources are often limited, unreliable, and sometimes unavailable, forcing students and their families to depend on rivers, wells, and other alternative sources to meet their daily needs. Although these sources provide temporary solutions, they are not always safe for consumption and may expose students to health risks while making it difficult to maintain proper hygiene and daily routines.

The World Health Organization and UNICEF (2023) reported that many communities still lack reliable water systems, forcing people to depend on unsafe water sources. This situation increases health risks and highlights the need to improve access to safe and sustainable water services. Similarly, UN-Water (2023) emphasized that the lack of safe drinking water especially affects vulnerable groups such as children and students living in rural areas where water sources are often distant or unsafe. Beyond the health risks associated with unsafe water sources, this

finding may also be understood through Maslow's Hierarchy of Needs. Maslow (1943) identified water as one of the most basic physiological needs required for human survival. When students struggle to obtain safe water for drinking, cooking, and hygiene, their fundamental needs remain inadequately fulfilled.

Distance and Physical Strain. Water scarcity requires students to travel considerable distances and exert physical effort to secure water for household use. The findings indicate that fetching water often involves long walks and carrying heavy containers, resulting in physical exhaustion even before students arrive at school. This routine places an additional burden on students and affects their overall well-being.

“Yes, sometimes we already feel very tired when we arrive at school because we just came from walking and carrying water.”

This experience is supported by the study of Tomberge et al. (2021), which found that students in water-scarce communities often walk long distances to collect water and carry heavy containers. Such activities can lead to physical strain, fatigue, and emotional stress, which may reduce their ability to concentrate in school and perform daily responsibilities effectively. From a theoretical perspective, the physical burden of collecting water reflects the challenges students face in satisfying their physiological needs. The energy and effort required to obtain water may leave students physically exhausted before classes begin. According to Maslow's theory, when individuals devote substantial resources to meeting basic survival needs, their ability to concentrate on educational tasks and higher-order goals may be reduced.

Time Constraints and Academic Interference. The process of obtaining water consumes a substantial portion of students' time each day. As a result, opportunities for studying, completing assignments, preparing for school, and resting are reduced. The findings suggest that water collection responsibilities compete directly with academic obligations and may negatively influence educational engagement.

“So, is it very challenging? Yes, because the hours spent getting water reduce the time we have for studying, finishing assignments, and resting, which can impact students' learning and overall well-being.”

Rhue et al. (2023) explained that household water insecurity and the effort required to access water can interfere with daily routines, including school attendance and other child-related tasks, linking water collection burdens to broader disruptions in children's lives and well-being. This finding strongly supports Maslow's proposition that unmet physiological needs can interfere with higher-level functioning. Students are forced to allocate significant time to securing water, leaving fewer opportunities for studying, completing assignments, and resting. Consequently, water scarcity indirectly affects educational engagement by competing with the time and attention necessary for academic success.

Stress and Emotional Strain. Beyond physical challenges, water scarcity also creates emotional difficulties among students. Feelings of frustration, anxiety, and stress emerged from participants' accounts, particularly when water sources became unavailable or required additional effort to access. The uncertainty associated with securing water contributes to emotional pressure that may affect students' daily functioning.

“It's really stressful and frustrating when we have to walk to bathe because there's no water nearby, and we have to walk 10 minutes to the river.”

The constant struggle to secure water creates emotional pressure for students and their families. This stress may affect students' comfort and concentration while attending school. Achore and Bisung (2022) explained that inadequate access to water can lead to psycho-emotional distress, including anxiety and frustration, especially among households experiencing daily water insecurity. The emotional difficulties reported by participants also reflect the safety level of Maslow's Hierarchy of Needs. Safety needs involve stability, security, and freedom from persistent worry. The uncertainty surrounding water availability creates feelings of anxiety and frustration that may affect students' psychological well-being. When students are preoccupied with concerns about water access, their ability to concentrate on academic tasks and participate fully in school activities may be diminished.

Limited Institutional Support. The findings further revealed concerns regarding the adequacy of support provided by local institutions in addressing water scarcity. Participants perceived existing interventions as insufficient to fully address the community's water needs. Consequently, households continue to experience difficulties in obtaining reliable water supplies and managing the effects of recurring shortages.

According to Ingutia (2024), weak institutional coordination and inadequate policy implementation can hinder efforts to ensure equitable water access. When local governments lack sufficient resources, technical expertise, or infrastructure support, communities often struggle to manage water scarcity effectively. As a result, households are forced to rely on alternative and sometimes unsafe water sources. Similarly, Cuaton et al. (2024) explained that governance gaps and limited institutional intervention in resettlement communities contribute to persistent household water insecurity. The limited support perceived by participants highlights the importance of institutional systems in helping individuals meet their physiological and safety needs. Without adequate assistance

from local authorities, students continue to face uncertainty regarding water access. This condition may hinder not only household well-being but also students' capacity to focus on educational goals and personal growth.

Impacts of Water Scarcity on the Daily Lives of Students

The findings revealed that water scarcity extends beyond difficulties in accessing water and significantly influences students' daily functioning, health, emotional well-being, and educational participation. Limited water availability affects both household and school-related activities, creating challenges that shape students' routines, comfort, and overall quality of life. The thematic analysis identified four major impacts:

Disrupted Daily Routines. Water scarcity significantly alters students' daily schedules and household responsibilities. The need to secure water before attending to personal and academic tasks often delays routine activities and increases the time required to complete everyday responsibilities.

Cook et al. (2023) explained that the time children and families spend collecting water can disrupt daily routines and reduce the time available for school attendance and study, as reductions in water collection time were associated with improvements in schooling-related time use and well-being. Within Maslow's framework, disruptions to daily routines occur because students must prioritize obtaining water, a basic physiological necessity, before attending to other responsibilities. The findings suggest that unmet basic needs influence how students organize their daily lives and may limit opportunities for academic preparation and participation.

Hygiene and Health Challenges. Limited water availability creates difficulties in maintaining proper hygiene and supporting overall health. The findings indicate that students sometimes struggle to bathe regularly, wash their uniforms, and perform other essential hygiene practices, leading to discomfort and reduced confidence in school.

“There are times when we feel uncomfortable at school because we cannot bathe or our uniforms are not clean.” Such situations may cause discomfort and affect students' confidence in school. According to Sultana and Nahar (2022), limited water access can hinder hygiene practices such as bathing and washing clothes. Kimutai et al. (2023) also found that inadequate water supply can affect both physical health and emotional well-being. Maintaining personal hygiene is closely associated with both physiological and safety needs. The inability to bathe regularly or maintain clean clothing may affect students' health, confidence, and sense of comfort in school. These conditions demonstrate how water scarcity extends beyond physical survival and influences students' social interactions, self-esteem, and educational experiences.

School Attendance and Punctuality. Accessing water before school frequently affects students' ability to arrive on time and attend classes consistently. Water collection responsibilities often take priority over school preparation, creating challenges that interfere with regular participation in educational activities.

“Many things are affected, sometimes we are late to class because we still have to fetch water in the morning.” This responsibility may cause them to arrive late or miss classes, reducing their ability to participate fully in academic activities. Popoola (2022) explained that water accessibility challenges, including long travel distances to water sources, can take children away from their education and disrupt their daily routines, often leading to reduced school attendance and time for learning. This finding illustrates the relationship between basic needs and educational functioning. Because students must secure water before attending school, educational activities may become secondary to immediate survival needs. Consistent with Maslow's theory, difficulties in meeting physiological needs may limit students' ability to engage fully in learning opportunities.

Physical and Emotional Fatigue. The combined demands of water collection and academic responsibilities contribute to both physical exhaustion and emotional strain. Students reported experiencing fatigue from long walks, carrying water containers, and balancing household obligations with school requirements, making daily activities increasingly difficult.

“The main impact is having to get water. We can't bathe early because walking to the river is troublesome.” Tshimambu et al. (2025) explained that long daily walks to distant water sources and the physical effort of collecting water can result in significant physical strain, fatigue, emotional distress, and reduced school attendance among adolescent girls, highlighting the importance of reliable water infrastructure in supporting students' well-being and academic performance. The physical exhaustion and emotional stress experienced by participants demonstrate the cumulative impact of prolonged water scarcity. When physiological and safety needs remain inadequately fulfilled, students may struggle to maintain concentration, motivation, and active participation in school.

Coping Strategies of Students Facing Water Scarcity

Despite the difficulties associated with limited water availability, students and their families employ various adaptive measures to meet their daily water needs. These strategies reflect their resilience and

resourcefulness in responding to persistent water shortages while maintaining household and educational responsibilities. The thematic analysis identified three primary coping mechanisms:

Alternative Water Sources. To address limited water availability, students and their families utilize a variety of alternative water sources. These include rivers, wells, nearby barangays, and community water collection points, which serve as important sources of water when regular supplies are unavailable.

In areas with water scarcity, communities often rely on alternative sources like rivers, communal wells, or shared collection points. Garrick et al. (2023) explained that using multiple water sources helps households cope when their main supply is unreliable. Similarly, Matimolane and Mathivha (2025) noted that rural communities often cope with water scarcity through local strategies such as rainwater harvesting, although limited infrastructure and support make it difficult to meet daily water needs. These adaptive behaviors demonstrate students' efforts to satisfy essential physiological needs despite limited access to reliable water infrastructure. While such strategies allow students and their families to continue functioning, they also reveal the continuing challenge of meeting basic needs within a water-scarce environment.

Reusing Water. Efforts to conserve water have led many households to adopt water reuse practices. Water previously used for washing dishes, laundry, and other household activities is often repurposed for cleaning and sanitation purposes, allowing families to maximize available resources.

“We use the water from washing dishes or laundry again for cleaning the toilet or around the house.”

Reusing water is a common strategy in communities facing scarcity. Water from tasks like washing dishes or laundry is often repurposed for cleaning floors or flushing toilets, helping households make the most of limited resources. Florides et al. (2024) explained that water reuse at the household level is an effective strategy to reduce freshwater demand, as water from activities such as bathing, laundry, and washing can be reused for non-potable purposes like irrigation and cleaning, helping support sustainable water management. The practice of reusing water reflects resourcefulness and resilience among students and their families. From Maslow's perspective, these efforts represent attempts to maximize limited resources in order to satisfy fundamental physiological requirements necessary for daily living and educational participation.

Rainwater Collection. Rainwater harvesting serves as another important coping strategy among students and their families. During periods of rainfall, water is collected and stored for future household use, helping supplement limited water supplies and reduce dependence on distant sources.

“Yes, when it rains, we collect and store the water to use at home.”

Prieto-Jiménez et al. (2024) explained that rainwater harvesting is a practical and sustainable way to supplement rural water supply, helping communities cope with water scarcity in areas where conventional water systems are insufficient. Rainwater harvesting further demonstrates how households adapt to ensure continued access to water. Although effective as a temporary solution, reliance on rainfall also highlights the vulnerability of students whose ability to meet basic physiological needs depends on environmental conditions beyond their control.

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CONCLUSION

This study explored the challenges, impacts, and coping strategies of students experiencing water scarcity in Barangay Asbang. The findings revealed that limited access to safe and reliable water affects students' daily routines, hygiene practices, physical well-being, emotional health, and academic responsibilities, often resulting in fatigue, time constraints, difficulties in school preparation, and reduced participation in educational activities. Despite these challenges, students and their families demonstrated resilience by utilizing alternative water sources, reusing water for household purposes, and collecting rainwater to meet their daily needs. These findings support Maslow's Hierarchy of Needs (1943), which emphasizes that basic physiological needs such as access to water must be adequately met before individuals can effectively focus on higher-level needs, including learning,

achievement, and personal development. The study therefore highlights that water scarcity is not only an environmental issue but also a social and educational concern that significantly influences students' well-being and academic engagement. Consequently, local government units and community leaders are encouraged to improve water supply systems, strengthen water storage facilities, and promote sustainable water management initiatives to help communities address water shortages more effectively and support students' overall welfare and educational success.

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