

Influence of Food Insecurity on Teachers' Performance and Motivation in Rural Public Secondary Schools in Adamawa State of Nigeria

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ABSTRACT

This study explored the influence of food insecurity on teachers' performance and motivation in rural public secondary schools in Adamawa State, Nigeria. It examined how income levels affect teachers' performance, assessed the impact of the availability of agricultural products on teacher' motivation and identified the relationship between food availability and teachers' overall well-being. The study was guided by three research questions and anchored on Edward L. Deci and Richard M. Ryan's Self-Determination Theory (SDT), (1985), which emphasized the role of autonomy, competence and relatedness in fostering motivation and well-being. SDT was selected because it highlighted the importance of external factors such as food security and income, in meeting teachers' basic psychological needs, which directly affect their motivation and performance. Data were analyzed using mean ratings. The findings indicated among others that lower income levels significantly undermine teacher performance, as financial stress from inadequate salaries diverts teachers' focus from their professional duties. The study concluded that adequate income levels and food availability are essential for ensuring that teachers can focus on their professional responsibilities and contribute positively to student outcomes.

INTRODUCTION

Food insecurity, particularly in rural areas, has been recognized as a major challenge that affects various aspects of society, including education. In rural public secondary schools in Adamawa state, Nigeria, food insecurity negatively impacts the daily lives of teachers. These teachers, who already face challenges such as inadequate salaries and limited resources, often struggle with the added burden of not having reliable access to nutritious food. This issue has a direct influence on their job performance and motivation, as food insecurity can affect their physical well-being, energy levels, focus and overall morale in the classroom. Understanding how food insecurity relates to teacher performance and motivation is crucial for addressing this problem and improving educational outcomes (Musa, 2022).

Teacher performance and motivation are critical components in the educational system, significantly influencing student outcomes and overall educational quality. The motivation of teachers is directly linked to their performance in the classroom, as a motivated teacher is more likely to employ effective teaching strategies, engross students enthusiastically and foster a positive learning environment. Motivated teachers are better equipped to inspire, encourage and challenge their students, which in turn lead to higher students' achievement (Kadzamira, 2017). When teachers are motivated, they tend to exhibit greater commitment to their profession, which reflects in their willingness to go beyond the basic requirements of their job. Furthermore, teacher motivation is essential for sustaining enthusiasm and passion for teaching over the long term. Teachers who are intrinsically motivated are more likely to innovate in their teaching methods and adapt to the varied needs of their students. These teachers often find personal satisfaction in the success of their students, which reinforces their commitment to the profession. Mertler (2018) explicated that motivated teachers are also more resilient in the face of challenges, such as limited resources or administrative pressures, because they are driven by a deep sense of purpose in their work.

In addition to improving classroom performance, teacher motivation plays a significant role in reducing teacher attrition. High levels of motivation can lead to job satisfaction, which is a key factor in retaining teachers within the profession. Mwamwenda (2019) emphasized that when teachers feel valued and supported, they are more likely to remain in their roles, thereby providing continuity and stability for their students. This stability is crucial, as consistent changes in teaching staff can disrupt the learning process and negatively impact students' outcomes. The importance of teacher performance and motivation extends beyond the classroom to influence broader educational outcomes. Motivated teachers are often leaders in their schools, contributing to a positive school culture and mentoring less experienced colleagues. This ripple effect enhances the overall effectiveness of the educational institution. Research by Kwame (2021) indicated that schools with high levels of teacher motivation and performance tend to have better student retention rates, higher student morale and improved academic performance across the board. Therefore, fostering

teacher motivation is not only beneficial for individual teachers but also for the entire educational community.

Teacher performance and motivation are crucial to the success of any educational system, yet they are often hindered by various challenges. One of the most significant problems is the lack of food. Food insecurity is one critical factor that affects teacher performance and motivation, particularly in rural areas. When teachers face challenges in meeting their basic needs, such as access to sufficient food, their ability to perform effectively in the classroom is compromised. As Ori (2021) noted, food insecurity can lead to stress, fatigue and health issues, all of which negatively impact teachers' concentration, energy levels and overall job performance. Teachers who are worried about where their next meal would come from are less likely to be fully present and engaged with their students. This stress can also lead to higher absenteeism and turnover rates, further disrupting the learning environment and student outcomes. As noted by Musa (2022), income levels of teachers and availability of agricultural products are the major factors to be considered in food insecurity in Adamawa state of Nigeria.

The income levels of teachers have a significant impact on their motivation, job satisfaction and overall effectiveness in the classroom. When teachers receive adequate compensation, it not only improves their financial well-being but also enhances their commitment to their profession. As explained by Salifu and Agbenyega (2020), teachers with higher income levels are more likely to be motivated, which in turn influences their dedication to student success and their willingness to engage in continuous professional development. On the contrary, inadequate income can lead to dissatisfaction and demotivation, affecting the quality of education provided. This is particularly evident in developing countries where low salaries are a common challenge faced by educators (Ofoha, 2019). Also, the availability of agricultural products plays a crucial role in enhancing teacher motivation, particularly in rural areas where agriculture is a primary source of sustenance. When teachers have easy access to fresh and affordable agricultural products, it alleviates some of their financial burdens, allowing them to focus more on their professional responsibilities. Akinagbe and Irohibe (2019) and Diao et al. (2020) asserted that the presence of abundant agricultural resources in a community can contribute to the well-being of teachers by reducing their cost of living, thereby increasing their disposable income. This financial relief can lead to improved job satisfaction and motivation, as teachers feel more secure and supported in their environment.

This is, no doubts, what many teachers face in Nigeria today, especially in Adamawa state. Food insecurity in the Adamawa state is an inescapable issue, driven by a combination of factors including conflict, climate change and economic instability. The region has been severely affected by ongoing violence, particularly from insurgent groups, which has disrupted agricultural activities and displaced millions of people from their homes. This displacement has significantly reduced food production, leading to shortages and skyrocketing of food prices. As noted by Olofin (2021), the changing climate in the area has also

exacerbated the situation, with erratic rainfall patterns making it increasingly difficult for farmers to cultivate crops. The resulting food scarcity has left many families struggling to meet their basic nutritional needs, contributing to widespread malnutrition and hunger. It is widely recognized that teachers in rural areas of Adamawa state are not exempted from the challenges of food insecurity. Teachers grappling with food scarcity are often preoccupied with meeting their basic needs and those of their families, which detracts them from their ability to fully concentrate on their teaching duties. Musa (2022) asserted that many teachers in the region experience heightened stress due to inadequate access to food, leading to fatigue, poor health and a decline in overall well-being. This situation diminishes their engagement with students and increases rates of absenteeism and turnover, as some teachers may be compelled to seek alternative sources of income or relocate to regions with better living conditions. The cumulative effect is deteriorating in the quality of education, as food insecurity disrupts the essential framework required for effective teaching and learning. Therefore, this study aimed to examine the influence of food insecurity on teacher performance and motivation in rural public secondary schools in Adamawa state, providing insights into how this critical issue impacts the educational system in these vulnerable communities.

In rural public secondary schools in Adamawa state of Nigeria, the problem of poor teacher performance and motivation has been a significant challenge, affecting the quality of education and the overall functioning of these institutions. Teachers in these areas often find themselves working under difficult conditions, with inadequate resources and minimal support from the educational system. This lack of motivation is evident in their approach to teaching, where the enthusiasm and commitment required to engage students and foster a conducive learning environment are often lacking. As a result, the educational experience of the students suffers, leading to a cycle of low academic achievement and limited opportunities for personal growth. The effect of poor teacher performance on schools in these rural areas is profound. With teachers unable to deliver lessons effectively, students often find themselves struggling to grasp fundamental concepts, which hamper their ability to progress through the curriculum. The schools, in turn, become places where the potential of students is not fully realized and the broader educational goals set by the government remain unmet. The absence of a stimulating and supportive learning environment seems to discourage students from attending school regularly, further contributing to poor academic outcomes and an overall decline in the school's reputation.

In these rural schools, the lack of motivation among teachers is reflected in their limited interaction with students outside of formal teaching hours. Teachers who are motivated and committed to their work often engage with students beyond the classroom, offering additional support and mentoring. However, in Adamawa state of Nigeria, the disconnection between teachers and students is stark. This lack of engagement deprives students of the additional guidance they need to overcome learning challenges, resulting in a disengaged student body that is less likely to achieve academic success. The

influence on students is particularly concerning. When teachers do not perform at their best, students are the ones who suffer the most. Their educational journey is tainted by inconsistency in teaching, a lack of inspiration and a curriculum that is poorly delivered. This leads to a situation where students leave school without the necessary skills or knowledge to succeed in further education or the workforce. The long-term consequences of this are significant, as these students are less likely to break the cycle of poverty that often characterizes rural areas in Adamawa state of Nigeria.

A key factor that can significantly enhance teacher performance and motivation in rural public secondary schools is the assurance of food security. Teachers who have access to sufficient and reliable food are more likely to be focused, healthy and motivated to carry out their duties effectively. The stability of food security not only supports teachers' physical health but also allows them to concentrate fully on their teaching responsibilities, free from the distractions of struggling to meet basic survival needs. However, in rural areas of Adamawa state, food insecurity remains one of the most pressing challenges faced by teachers. This persistent issue not only affects their personal well-being but also undermines their ability to engage with students, leading to diminished classroom effectiveness, higher absenteeism and increased turnover rates. Consequently, this impacts the overall quality of education in the region. Therefore, this study sought to examine the influence of food insecurity on teacher performance and motivation in rural public secondary schools in Adamawa state, aiming to shed light on this critical problem and suggest possible interventions to improve educational outcomes in these vulnerable areas.

The main purpose of the study is to investigate the influence of food insecurity on teachers' performance and motivation in rural public secondary schools in Adamawa state of Nigeria. Specifically, the study:

1. Examined the influence of income levels on teachers' performance in rural public secondary schools in Adamawa state of Nigeria.
2. Determined availability of agricultural products on teachers' motivation in rural public secondary schools in Adamawa state of Nigeria.
3. Identified the relationship between availability of food and teachers' well-being in rural public secondary schools in Adamawa state of Nigeria.

LITERATURE REVIEW

Food Insecurity

Food insecurity refers to the lack of consistent access to adequate and affordable nutritious food, a critical issue that affects individuals and households across various regions, particularly in rural areas. It is not merely a matter of hunger, but a multifaceted problem that includes the uncertainty of obtaining food and insufficient nutritional quality. Arene and Anyaeji (2020) identified several driving factors of food insecurity, including poverty, unemployment and the rising cost of food, all of which hinder people's ability to secure the necessary food resources for themselves and their families.

The concept of food insecurity also encompasses the psychological and social repercussions that arise from the struggle to acquire sufficient food. Households affected by food insecurity often endure significant stress and anxiety due to the unpredictability of their food supply. This uncertainty can lead to unhealthy coping strategies, such as reducing meal portions, skipping meals, or compromising on the nutritional quality of the food consumed (Labadarios et al., 2018). As a result, individuals may resort to cheaper, less nutritious food options, which increase the risk of malnutrition and other related health problems. Food insecurity, therefore, is intricately linked to both physical and mental health, directly affecting overall quality of life (Barrett, 2021). In the context of education, food insecurity among teachers can have serious implications, leading to reduced motivation, poor performance, absenteeism and a decline in the quality of education in affected areas.

Teachers' Performance

Teachers' performance refers to the effectiveness with which educators execute their instructional and professional responsibilities. It encompasses various dimensions, including lesson planning, classroom management, instructional delivery and the ability to engage and motivate students. Performance is typically assessed through multiple indicators, such as student achievement, classroom observations and feedback from both students and colleagues. Adeniji and Omotayo (2021) posited that the quality of teachers' performance is a crucial determinant of the overall success of the educational process, as it directly impacts students' learning outcomes and academic achievement. The concept of teachers' performance is multifaceted, involving not only the technical aspects of teaching but also the interpersonal skills necessary for creating a supportive and inclusive learning environment. Effective teachers must possess a deep knowledge of their subject matter, while also being skilled in communication, empathy and adaptability. As noted by Okoye and Anyanwu (2019), these qualities are essential for tailoring teaching strategies to meet the diverse needs of students, thereby ensuring that all learners, regardless of their background or learning style, are given the opportunity to thrive. Furthermore, teachers' performance is closely linked to their capacity to cultivate a positive classroom atmosphere that encourages active student participation, critical thinking and collaboration (Ikegbusi & Eziamaka, 2018). In rural areas, such as those in Adamawa state, where food insecurity can significantly affect teachers' well-being, performance may be compromised. Teachers facing hunger and financial stress may struggle to maintain focus, energy and enthusiasm in the classroom. Therefore, addressing factors like food insecurity is essential to improving teacher performance and, by extension, the quality of education in these communities.

Teachers' Motivation

Teachers' motivation refers to the combination of internal and external factors that inspire educators to perform their duties with enthusiasm, dedication, and effectiveness. It plays a pivotal role in the teaching profession, as motivated teachers are more likely to engage in innovative instructional

practices, maintain a positive outlook towards their work, and persevere through challenges. Adebayo and Olatunji (2020) highlighted that teachers' motivation can be driven by various sources, including personal fulfillment, recognition for their efforts, opportunities for career growth and a supportive working environment. When teachers are motivated, they are not only more effective in delivering quality education but also more capable of fostering a positive learning experience for their students, which enhances educational outcomes. Intrinsic motivation, which stems from an educator's passion for teaching and the satisfaction derived from helping students to achieve success, is particularly crucial. Educators who are intrinsically motivated often find joy in the teaching process, viewing their students' progress as a rewarding experience in itself. Ejiogu and Ugwu (2018) asserted that this form of motivation is essential for sustaining long-term commitment to the profession, as it nurtures a deep sense of purpose and connection between teachers and their work. Intrinsically motivated teachers are more likely to go beyond the minimum expectations of their roles, seeking creative methods to engage students, improve classroom interaction and continuously refine their teaching strategies.

However, in regions where food insecurity is prevalent, such as rural areas in Adamawa state, teachers' motivation can be severely impacted. External stressors, such as the struggle to secure basic necessities like food, can diminish intrinsic motivation and negatively affect their enthusiasm, job satisfaction and overall performance. Addressing these external factors is vital to ensuring that teachers remain motivated and effective in their roles.

Theoretical Framework

This study is anchored on Self-Determination Theory propounded by Edward L. Deci and Richard M. Ryan (1985). SDT is a theory of human motivation that emphasized the importance of individuals fulfilling three key psychological needs: autonomy, competence and relatedness. These needs are essential for fostering intrinsic motivation and psychological well-being, which are critical for effective performance and job satisfaction. This theory emphasized the role of intrinsic and extrinsic motivation in human behaviour and highlighted how meeting basic psychological needs-such as autonomy, competence and relatedness can enhance motivation and well-being.

At the core of SDT is the idea that when basic needs are met, individuals experience higher levels of motivation and effectiveness. Food insecurity, which directly affects the basic physiological needs of teachers, is an obstacle to achieving these three psychological needs. When teachers are food-insecure, their autonomy and sense of competence in the workplace are compromised, resulting in lower motivation and diminished job performance. This makes SDT particularly relevant to understanding how food insecurity influences teachers in rural areas. SDT emphasized the strong connection between well-being and motivation. Teachers in food-insecure environments are likely to experience stress and anxiety related to their inability to secure sufficient food for themselves and their families. This stress not only reduces their intrinsic

motivation such as their passion for teaching but also influences their overall performance in the classroom. By using SDT, the study can explore how teachers' well-being, undermined by food insecurity, limits their professional effectiveness and satisfaction. SDT is particularly useful because it integrates both external (extrinsic) and internal (intrinsic) factors that affect motivation. Food insecurity, an external factor, creates internal challenges for teachers, such as decreased self-esteem and focus, thereby negatively affecting their classroom performance and motivation. This theory allows for an examination of how external socioeconomic conditions influence internal states, leading to a decline in teacher productivity and motivation.

Unlike some traditional theories that focus narrowly on financial or resource-related aspects, SDT provides a more comprehensive framework that takes into account the psychological needs of individuals. In the context of rural public secondary school teachers in Adamawa state of Nigeria, SDT helps in understanding not just how food insecurity affects physical health, but also how it corrodes the psychological conditions necessary for best teaching performance. When teachers lack access to sufficient and nutritious food, their ability to meet basic physiological needs (such as health and nutrition) is compromised. According to SDT, this distraction prevents them from fulfilling higher-level needs like competence and autonomy, which are essential for maintaining motivation. In the context of rural Adamawa state, where food insecurity is predominant, teachers may feel physically exhausted and mentally distracted, making it difficult for them to engage fully in their teaching roles.

Moreover, the lack of food security can affect teachers' sense of competence, a core aspect of SDT. When teachers are concerned about meeting their basic needs, they may feel less capable of performing well in their jobs. This erosion of competence reduces their overall motivation, leading to lower levels of job satisfaction and effectiveness in the classroom. Self-Determination Theory offers a strong foundation for exploring the relationship between food insecurity and teacher performance in rural public secondary schools in Adamawa state of Nigeria. Its focus on basic psychological needs aligns well with the challenges posed by food insecurity, allowing for a comprehensive analysis of how unmet needs reduce motivation and performance. In this context, SDT provides a modern and effective lens for understanding how food insecurity affects teachers' well-being, motivation and overall job satisfaction. By addressing food insecurity, stakeholders can help foster better teaching environments, ultimately improving educational outcomes in rural public secondary schools in Adamawa state of Nigeria.

METHODOLOGY

This study adopted the descriptive survey research design to investigate the influence of food insecurity on teacher performance and motivation in rural public secondary schools in Adamawa state, Nigeria. According to Ikegbusi (2022: 264), a survey research design allows for the collection and analysis of data from a representative sample of a population through instruments such as questionnaires or interviews. The descriptive survey design was chosen for this

study as it enabled a comprehensive examination of teachers' experiences related to food insecurity and its impact on their professional performance and motivation.

Area of the Study

The study was conducted in Adamawa state, located in North-eastern Nigeria, characterized by both urban and rural regions. A significant portion of the population in the state resides in rural areas, where food insecurity is prevalent due to economic challenges, poor infrastructure and agricultural difficulties. Five Local Government Areas (LGAs) in rural Adamawa were purposively selected for the study based on their high levels of food insecurity, rural characteristics and the observed challenges of teacher shortages and absenteeism in their public secondary schools. These LGAs include Yola North, Yola South, Numan, Mubi South, and Gombi. The selected schools within these LGAs were rural public secondary schools known to face food insecurity and related difficulties affecting both teachers and students.

Population and Sample of the Study

The target population for the study consisted of teachers working in public secondary schools in rural Adamawa state. Using a stratified random sampling technique, 500 teachers were selected from schools across the five LGAs. Each LGA contributed 100 teachers to the sample, ensuring an equal and representative distribution. Schools were purposively chosen based on their location in food-insecure rural areas, the challenges of teacher absenteeism and their poor academic outcomes. This selection ensured that the study focused on schools and teachers directly affected by food insecurity, providing relevant insights into the issue.

Instrument for Data Collection

The primary tool for data collection was a self-structured questionnaire, which was divided into three sections addressing key aspects of the study: (1) Income Levels, (2) Availability of Agricultural Products, and (3) Teachers' Well-being. The questionnaire consisted of 15 items, grouped into three clusters corresponding to the themes of the study. A four-point Likert scale was used to measure the responses: Strongly Agree (4 points), Agree (3 points), Disagree (2 points), and Strongly Disagree (1 point). This scale allowed respondents to express the extent of their agreement with the statements provided.

Procedure for Data Collection

The questionnaire was administered to the 500 selected teachers across the five LGAs. The teachers were provided with the questionnaires in their schools and were given clear instructions on how to complete them. Data collection took place over a period of three weeks to ensure that all responses were accurately gathered.

Method of Data Analysis

The collected data were analysed using mean ratings to determine the average responses of the teachers regarding income levels, food availability and their overall well-being. The decision rule was that any item with a mean rating of 2.5 or above would be considered as "Agreed" (indicating a positive response to the statement), while items with a mean rating below 2.5 would be considered as "Disagreed." This method allowed for a clear interpretation of the data, providing insights into the general trends and opinions of the respondents concerning the study variables. The chosen analytical approach effectively identified the key factors influencing teacher performance and motivation, while also highlighting the relationship between food insecurity and the well-being of teachers in rural Adamawa state.

RESULT AND DISCUSSION

Table 1. Respondents Mean Ratings on the Influence of Income Levels on Teachers’ Performance in Rural Public Secondary Schools in Adamawa State of Nigeria

S/N	Item Statements	$\sum fx$	\bar{x}	Dec.
1	Low-income levels often lead to reduced motivation among teachers	1450	2.9	Agree
2	Teachers in rural areas with low-income levels are more likely to leave their positions for better-paying jobs elsewhere	1750	3.5	Agree
3	Teachers with low-income levels may struggle to access professional development opportunities	1740	3.5	Agree
4	Financial stress due to low-income levels can lead to increased absenteeism among teachers	1760	3.5	Agree
5	Low-income teachers might not be able to afford the necessary teaching resources	1570	3.1	Agree
	Grand mean		3.3	Agree

Source: Field Survey, 2024

N= 500

The results in Table 1 indicated that all item statements had mean scores ranging from 2.9 to 3.5, all of which are above the decision threshold of 2.5. This showed that the respondents agreed that income levels have a significant influence on teachers’ performance in rural public secondary schools in Adamawa State. Specifically: Item 1 showed that teachers with low-income levels experience reduced motivation, as reflected by a mean score of 2.9. This suggested that inadequate financial compensation contributes to a decrease in enthusiasm for teaching tasks. Item 2 had a mean score of 3.5, highlighting that teachers in rural areas with lower income levels are more likely to leave their positions for better-paying opportunities elsewhere. This high score reflects the perceived instability in rural teaching positions due to financial constraints. Item 3 also had a mean score of 3.5, indicating that low-income teachers often

struggle to afford professional development opportunities, which in turn affects their ability to improve their teaching skills and performance. Item 4 revealed that financial stress caused by low-income levels leads to higher absenteeism among teachers, with a mean score of 3.5. This suggested that economic hardship contributes to teachers being absent from school more frequently, negatively impacting their job performance. Item 5 had a mean score of 3.1, reflecting that low-income teachers may not be able to afford essential teaching materials, which can hinder effective instructional delivery.

The grand mean score of 3.3 suggested a consensus among respondents that income levels significantly influence teachers' performance. The findings demonstrated that inadequate income undermines teachers' ability to perform optimally in their roles. Issues such as reduced motivation, the inability to access professional development, absenteeism and the lack of necessary teaching resources are all tied to the financial challenges faced by teachers in rural Adamawa state. The analysis therefore indicated that low-income levels have a detrimental effect on teacher performance, reinforcing the need for improved financial support and resources for teachers in rural areas to enhance the quality of education in these communities.

Table 2. Respondents Mean Ratings on the Effect of Availability of Agricultural Products on Teachers' Motivation in Rural Public Secondary Schools in Adamawa State of Nigeria

S/N	Item Statements	$\sum fx$	\bar{x}	Dec.
1.	Teachers who have access to agricultural products may engage in farming, providing supplementary income	1570	3.1	Agree
2.	Access to agricultural products can improve food security for teachers, reducing financial stress	1590	3.1	Agree
3.	Teachers involved in agricultural activities may feel more connected to the community	1750	3.5	Agree
4.	The availability of agricultural products may allow teachers to balance their teaching responsibilities with farming activities	1660	3.3	Agree
5.	Access to locally grown agricultural products can reduce the cost of living for teachers	1480	3.0	Agree
	Grand Mean		3.2	Agree

Source: Field Survey, 2024

N= 500

Again, the data in Table 2 revealed that the mean ratings for items 6 to 10 range between 3.0 and 3.5, which are all above the decision threshold of 2.5. This indicated that the respondents agreed that the availability of agricultural products positively impacts teachers' motivation in rural public secondary schools in Adamawa state. Item 6, with a mean score of 3.1, suggested that teachers who have access to agricultural products may engage in farming

activities, which provide a supplementary source of income. This additional income is likely to alleviate some financial burdens, enhancing teacher motivation. Item 7 also had a mean score of 3.1, indicating that access to agricultural products can improve food security for teachers. This reduced financial stress allows teachers to focus more on their professional responsibilities, thus enhancing their motivation and overall job satisfaction. Item 8 had the highest mean score of 3.5, suggesting that teachers involved in agricultural activities feel more connected to their local communities. This community involvement can foster a sense of belonging and commitment, which may further motivate teachers to remain dedicated to their teaching roles. Item 9 had a mean score of 3.3, indicating that the availability of agricultural products helps teachers balance their teaching responsibilities with farming activities. The ability to engage in both teaching and farming without one negatively affecting the other serves as a motivating factor for many teachers in these rural areas. Item 10 had a mean score of 3.0, highlighting that access to locally grown agricultural products can reduce the cost of living for teachers. Lower living costs alleviate some financial stress, thus contributing to higher motivation levels.

The grand mean score of 3.2 confirmed that the availability of agricultural products positively impacts teacher motivation. The findings suggested that access to agricultural products not only provides supplementary income but also enhances food security and fosters community incorporation, all of which are perilous factors that contribute to the motivation of teachers in rural areas. These findings underscore the importance of agricultural resources in supporting and motivating teachers in regions where food insecurity and financial constraints are prevalent. Therefore, the availability of agricultural products plays a significant role in reducing financial stress, improving food security and creating stronger community bonds, all of which contribute to higher levels of teacher motivation in rural public secondary schools in Adamawa state.

Table 3. Respondents Mean Ratings on the Relationship between Availability of Food and Teachers' Well-Being in Rural Public Secondary Schools in Adamawa State of Nigeria

S/N	Item Statements	$\sum fx$	\bar{x}	Dec.
1.	Access to food reduces stress and anxiety related to food insecurity	1460	2.9	Agree
2.	Availability of food directly influences teachers' physical health, ensuring they have the energy to perform their duties	1590	3.1	Agree
3.	When teachers have reliable access to food, they are more likely to experience higher levels of job satisfaction	1760	3.5	Agree
4.	Teachers who are well-nourished are less likely to miss work due to health-related issues.	1570	3.1	Agree
5.	The availability of food positively influences teachers' sense of security, enhancing their overall well-being	1480	3.0	Agree
	Grand Mean		3.1	Agree

Source: Field Survey, 2024

N= 500

Moreover, the results from Table 3 showed that the mean ratings for items 11 to 15 range from 2.9 to 3.5, which are all above the decision rule cut-off point of 2.5. This indicated that the respondents agree that there is a relationship between the availability of food and teachers' well-being in rural public secondary schools in Adamawa state. Item 11 had a mean score of 2.9, indicating that access to food helps reduce stress and anxiety related to food insecurity. Teachers who are less stressed due to secure food access are more likely to perform their professional duties effectively, suggesting that food availability is closely linked to emotional well-being. Item 12 recorded a mean score of 3.1, highlighting that the availability of food significantly impacts teachers' physical health, providing them with the energy needed to fulfil their teaching responsibilities. Healthy, well-nourished teachers are better able to handle the physical and mental demands of their job, which contributes to improved performance. Item 13 had the highest mean score of 3.5, indicating that reliable access to food is strongly associated with higher levels of job satisfaction. Teachers who do not have to worry about food insecurity are more content in their roles, which likely enhances their motivation and commitment to their teaching responsibilities. Item 14, with a mean score of 3.1, suggested that well-nourished teachers are less likely to miss work due to health-related issues. This finding demonstrated the direct impact of proper nutrition on reducing absenteeism, which is critical to maintaining consistent teacher performance and student outcomes. Item 15 had a mean score of 3.0, indicating that the availability of food contributes positively to teachers' sense of security. Teachers who feel secure in their access to basic needs, such as food, experience an overall enhancement in their well-being, which reflects positively on their professional attitude and job performance.

The grand mean score of 3.1 confirmed that the availability of food has a positive relationship with teachers' well-being. The data suggested that secure access to food helps alleviate stress, improves physical health, reduces absenteeism and fosters a sense of security and job satisfaction among teachers. These factors collectively contribute to a more motivated, healthy and engaged teaching workforce in rural public secondary schools in Adamawa state. Therefore, the availability of food plays a crucial role in enhancing both the physical and emotional well-being of teachers. Teachers who have consistent access to nutritious food are more likely to perform effectively in the classroom, maintain regular attendance, and experience greater job satisfaction, all of which ultimately benefit the educational outcomes in rural public secondary schools.

The data presented in Table 1 clearly indicated that respondents recognized a significant influence of income levels on teacher performance in rural public secondary schools in Adamawa state, Nigeria. Respondents agreed that lower income levels detrimentally impact teachers' effectiveness in the classroom. Specifically, teachers experiencing inadequate salaries often

encounter financial stress, which diverts their focus away from instructional responsibilities.

This is evident in the agreement that low-income levels correlate with reduced motivation, increased absenteeism and a tendency for teachers to seek better-paying opportunities elsewhere. The findings aligned with Ejiogu (2019), who emphasized that teachers perceive inadequate financial compensation as a demotivating factor, ultimately leading to diminished instructional quality. Conversely, it is worth noting that some researchers, such as Smith (2021), have suggested that intrinsic factors, such as passion for teaching, might mitigate the negative impacts of low income. However, in the context of this study, the overwhelming consensus among respondents highlighted the critical role that adequate financial remuneration plays in sustaining teacher performance.

Again, the data in Table 2 reflected the respondents' agreement on the significant impact of the availability of agricultural products on teacher motivation. The data suggested that teachers in areas with abundant food sources experience higher levels of motivation, which contrasts with those in food-insecure regions who reported lower motivation levels. Respondents noted that access to agricultural products enables teachers to engage in farming, thereby providing supplementary income and reducing financial stress.

Akinyemi (2020) supported this perspective, asserting that consistent access to food alleviates the anxiety associated with food insecurity, allowing teachers to focus on their instructional duties. In contrast, some scholars, such as Agrawal and Jaggi (2023) argued that while agriculture is vital for economic stability in rural areas, it can also pull teachers away from their educational commitments, thereby impacting student outcomes. Nonetheless, the findings of this study underscore the importance of food security as a motivating factor for teachers, illustrating the interconnectedness of their professional responsibilities and personal well-being.

Furthermore, the data in Table 3 indicated that respondents acknowledged a clear relationship between food availability and teachers' well-being in rural public secondary schools in Adamawa state. The data revealed that adequate food availability is crucial for maintaining teachers' overall well-being. Those with reliable access to sufficient food reported heightened job satisfaction and effectiveness in their professional duties.

The findings aligned with the assertions of Adeola and Mohammed (2020), who noted that teachers with secure access to food experience reduced stress and anxiety, which translates to improved physical health and increased energy levels. This correlation suggested that when teachers' basic needs are met, they are less likely to face health-related absenteeism and more likely to perform effectively in their roles. On the contrary, a study by Ndubuisi (2023) suggested that factors like job satisfaction can vary independently of food security, indicating that other elements, such as administrative support, also play a significant role in teacher well-being. Nevertheless, the current study emphasized that food availability is a foundational aspect of teachers' well-being and performance, illustrating its essential role in fostering a conducive teaching environment.

CONCLUSIONS AND RECOMMENDATIONS

The influence of food insecurity on teacher performance and motivation in rural public secondary schools in Adamawa state of Nigeria revealed significant negative consequences. Teachers facing food insecurity are likely to experience lower motivation, reduced job satisfaction and diminished overall performance. This situation leads to high absenteeism, stress and decreased teaching quality, ultimately impacting student outcomes. The findings highlighted a pressing need for interventions to address food insecurity as a means to improve teacher well-being and consequently, the academic environment in rural schools.

Based on Self-Determination Theory (SDT) by Deci and Ryan (1985), teachers who face food insecurity are less likely to experience autonomy, competence and relatedness-three key elements essential for intrinsic motivation. Consequently, food-insecure teachers may experience lower job satisfaction, diminished performance, increased absenteeism, and reduced dedication to teaching, which ultimately hinders student academic outcomes and the overall quality of education in rural schools.

The study therefore concluded that food insecurity has a significant impact on teacher performance and motivation in rural public secondary schools in Adamawa state of Nigeria. Adequate income levels and food availability are essential for ensuring that teachers can focus on their professional responsibilities and contribute positively to student outcomes. Addressing food insecurity through policy interventions, such as increasing teachers' salaries and providing access to agricultural products, is crucial for improving the quality of education in rural areas.

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Theoretical Implications

The study reinforces SDT's assertion that fulfilling basic needs is crucial for fostering intrinsic motivation. Food insecurity undermines teachers' psychological needs for autonomy, competence and relatedness, negatively affecting their motivation to perform at their best. Ensuring food security would thus align with SDT by creating conditions that allow teachers to feel more autonomous, competent and connected, leading to higher levels of job satisfaction and motivation.

The application of SDT in this study broadens the understanding of how food insecurity, a fundamental physiological need, affects the psychological needs outlined by SDT. This study encourages further research into the intersection of basic human needs and intrinsic motivation in other developing country contexts.

Practical Implications

1. Policymakers should introduce food assistance programs for teachers in rural areas. Providing access to affordable or subsidized food could alleviate the pressures of food insecurity, helping teachers meet their basic needs, which would, in turn, improve their motivation, performance, and job satisfaction in line with SDT.
2. Food insecurity can hinder teachers' sense of competence. Offering regular meals and nutritional support could create a more stable and supportive work environment, fostering teachers' confidence in their professional abilities and promoting long-term teacher retention and effectiveness.
3. Collaborating with local communities to create school gardens or local farming projects can provide a sustainable food source for teachers and students. These initiatives would address food insecurity while fostering a sense of relatedness between schools and their surrounding communities, fulfilling one of SDT's core psychological needs.
4. International agencies and NGOs should partner with governments to deliver targeted programs aimed at rural teachers in food-insecure areas. These partnerships could include meal distribution, agricultural training or funding for school-based food programs, contributing to the well-being of teachers and improving educational outcomes.

In conclusion, addressing food insecurity in rural public schools is critical to enhancing teacher motivation and performance. Practical interventions grounded in Self-Determination Theory offer a clear pathway to improving teacher welfare, motivation and educational success in rural public secondary schools in Adamawa state of Nigeria.

Based on the findings of the study, the following recommendations were made:

1. The government should increase the income levels of teachers, particularly in rural areas, to reduce financial stress and enhance job satisfaction. These would go a long way to allow teachers to focus more on their professional duties and personal growth.
2. Programs aimed at increasing the availability of agricultural products in rural areas should be prioritized to ensure that teachers have access to adequate food supplies.
3. To strengthen the relationship between food availability and teachers' well-being, it is essential to establish food security programmes that prioritize teachers in rural areas. Initiatives such as subsidized food supplies or community-based food distribution systems can help ensure that teachers have reliable access to nutritious food. These efforts would help improve their motivation and effectiveness.

FURTHER STUDY

This research still has limitations so further research on this topic is still needed "Influence of Food Insecurity on Teachers' Performance and Motivation in Rural Public Secondary Schools in Adamawa State of Nigeria".

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