



Assessment of food security, living condition, personal hygiene health determinants and relations among *Almajiri* students in Sokoto metropolis, Nigeria

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ABSTRACT

Almajiri are students' is an ancient Islamic system of teaching. This paper assesses food security, personal hygiene, living condition, and violence in *Almajiri*. Survey using questionnaire and descriptive statistics, and χ^2 at $p < 0.05$ were used. Most schools were donated (66.7%), and minority (33.3%) were self-owned. Schools were built with zinc (33.3%), mud (33.3%), and modern tools (33.3%). There are urinals in all the schools (100.0%), overcrowding (100.0%), 66.7% have windows and doors, (33.3%) have no windows and doors. 66.% of the schools have mats for sitting, 33.3% have chairs. Risks found at schools are: open defecation (33.3%), and nearby water (66.7%). Majority of students stay for 4 months before returning home (66.7%), and significant portion of them return after graduation (33.3%). Pertaining personal hygiene 66.7% of the students' wear shoes, 33.3% do not wear; 66.7% have cleaned clothes, 33.3% dirty clothes, there was no water at 66.7% of the schools, 33.3% have water. 66.7% wash hands after toilet, none wash hands before eating. On food security for *Almajiri*, 66.7% eat once, 33.3% eat twice daily. They eat Tuwo (33.3%), Gari (33.3%), and unspecified food (33.3%); source of food includes begging (33.3%), external labor (33.3%), and home (33.3%). Types of violence encountered are: weapon use (33.3%), fight (33.3%), and flogging (33.3%). Majority (66.7%) of students like western education, and (33.3%) replied

no. All students are feeling their condition psychologically; some are at SSI (33.3%), JSSI (33.3%), and (33.3%) never attend western school. Poor health determinants exist in Almajiri students in Sokoto.

Keywords: *children, food security, personal hygiene, Quran, Muslim, health, determinants*

1. Introduction

The ability to read the Quran properly and correctly, and the capacity to understand it is an important thing to all and sundry Muslims. Therefore, Quranic literacy should be embraced as early as possible under the care and guidance of parents in a family or under the care of a teacher (Inten & Agustina, 2022). *Almajiri* is a Hausa language word which was derived from an Arabic word “*Almuhajir*” that in Arabic refers to someone who left his comfort home/ town and travelled to another place/ land/ country for the sake of Islamic religion propagation or relations. Particularly, in Hausa land *Almajiri* is mostly dubbing to youngsters 4-18 years old, adults, who leave their families in pursuit for Islamic knowledge/ education in northern Nigeria and related parts of West Africa (Goments & Esomchi, 2017). *Almajiri* students are of different classes, namely, *Gardi* (adult), *Titibiri* (adolescent), and *Kolo* (infant). Their schedule of class sessions is performed in the morning (5-11:00 am), afternoon (2-4:00 pm), and the night (7:00-10:00pm) (Mohammed & Danjuma, 2015), with a motive to ensure that children or Muslim adherents read and recite the Quran properly, children are inducted into the Islamic tenets, values, and morals, and children become versatile in Arabic and basic Islamic sciences to lay a foundation for further studies (Mohammed & Danjuma, 2015; Ya’aqub & Nasarawa, 2018). Historically, migration for knowledge or religion has been an order of the day from the time of prophet Muhammad SAW, through the advent of Islam in the Africa continent. The system has been very smooth until the advent of Western colonialists. The introduction of Western education halts the funding of Islamic education by the government and wealthy individuals, and in turn leading to the fall of *Almajiri* system (Sarkingobir et al., 2019). Before colonialization *Almajiri* was an established, organized and comprehensive system of education funded by the state for learning principles, Islamic values, jurisprudence, and theology. *Almajiri* education was initially funded by the state through alms giving, treasury, under the control of Muslim leaders. Similarly, students have liberty to enrol in vocational and technical learning such as farming, fishing, tailoring, masonry, building, etc.; thus there is no any reason whatsoever for students to indulge in begging and other lowly behaviours (Liman, 2014; Gomment & Esomchi, 2017; Maigari, 2017).

Nowadays, the *Almajirai* (singular: *Almajiri*) are boys and youngsters from primary-school age to early twenties who have come to cities and villages in northern Nigeria,

including Sokoto state to study Quran. They do not stay at homes with their parents, instead they live with the teachers, who provides limited care and supervision over them. They learn to read and write Islamic knowledge but not western education, except in few of them (Nigeria Research Network, 2013). *Almajiri* hardly learn skills to economically sustain future life, older ones engage in menial work, petty trading, handicrafts, while younger ones sometimes do house help or in most cases begging (NRN, 2013). Sokoto is the second state with highest number of *Almajiri* in the North. About nine thousand five hundred and fifty-one *Almajiri* are in Sokoto based on census. But the number can increase and the statistic might be underreported (Ibrahim & Rabi, 2017). *Almajiri* as a child has many rights, including the right to education, healthcare, love and care, adequate food and shelter, and clean environment. Despite these rights, they are spotted in every corner, street, junctions etc.... languishing helplessly. They are viewed as homeless, poor, neglected, maltreated children wandering the streets for begging and livelihood (Zakir et al., 2014; Dalhat, 2016). *Almajiri* cannot afford healthcare services in most of the situations. It is reported that the conditions they passed touch their physical and psychosocial, psychological development and health, because the society and parents neglected them. They may serve as instruments for terrorism and juvenile delinquency (Comment & Esomchi, 2017).

A surf of past studies had revealed a number of handful studies performed on *Almajiri* subject due to its relevance in the country. Parable, psychoactive use among *Almajiri* in the Northern Nigeria has long been observed in *Almajiri* students denoting a high prevalence use of different drugs by the students (Abdulmalik et al., 2009). An investigation of psychological effects of *Almajiri* education system in Borno state, Nigeria reiterated that the children are socially and psychologically inflicted because they lack enough care, stay alone, improper feeding, lack of security, and dangerous experience among other (Chukwu et al., 2016). In Zaria city, Northwestern Nigeria an investigation on psychiatric disorders among *Almajiri* students was done, and it was found that *Almajiri* students show more psychiatric problems than the pupils drawn from public primary schools in the area (Abdullateef et al., 2017). Teke et al. (2020) outlined that, *Almajiri* education system was once a prosperous type that was debilitated through the advent of colonial system of education. Afterwards, the *Almajiri* lost its prestige and sponsors and treated as inferior by the colonialist and governments of the day, *Almajiri* students and teachers were abandoned with hunger and compelled to beg and indulge in menial jobs for survival. Therefore, it is indeed better to render attention to the *Almajiri* education for the benefit of all (Teke et al., 2020). An analysis of relationship of *Almajiri* education and COVID-19 in the Northern part of Nigeria refers the condition of *Almajiri* as unhygienic, untidy, vulnerable to diseases including COVID-19. Therewith, *Almajiri* system could threaten the ability of the whole society to comply to the public health measures essential for public health prevention against COVID-19 disease (Awofeso et al., 2021). In the nearby Sokoto, a study examined the prevalence of intestinal parasites

in Almajiri students in Zamfara state, and *Teania saginata*, *Ascaris lumbricoides*, *Trichuris trichura*, *Entamoeba histolyca*, *Ancylostoma duodenale* parasites were observed posing significant health issues among Almajiri students in the state, which are afterwards of unhygienic conditions, poor water quality, overcrowding and other related health determinants (Mohammed et al., 2022). From the underlined studies, a number of health determinants were enumerated such as drug abuse, menial job, and effects on health such as psychiatric problems and prevalence of intestinal parasites among the Almajiri students from different parts of the country. And it was recorded that the *Almajiri* are in bad shape, therefore, there is need for data that was conceived from empirical study in the actual Sokoto state that reveals the extent of health determinants in *Almajiri* in Sokoto to fill the gap of knowledge shown by the surfed literature. Consequently, there is need to explore the exact nature of *Almajiri* education in Sokoto, a supreme centre of Nigerian Muslims, with a view to help policy makers and proffer solution in curtailing the trend using public health approach.

2. Research Methods

Study location

The study was carried out in Sokoto, Sokoto state, Nigeria. The area was indicated in the figure 1. Sokoto is one of the 36 states of the federal Republic of Nigeria. It is located in the Northwest part of the country and it remains the seat of the caliphate. Being the seat of the caliphate, Sokoto is the centre of Islamic norm and values in the country and other nearby countries. It has conspicuous practice of *Almajiri* system of education, therefore suitable for this study.

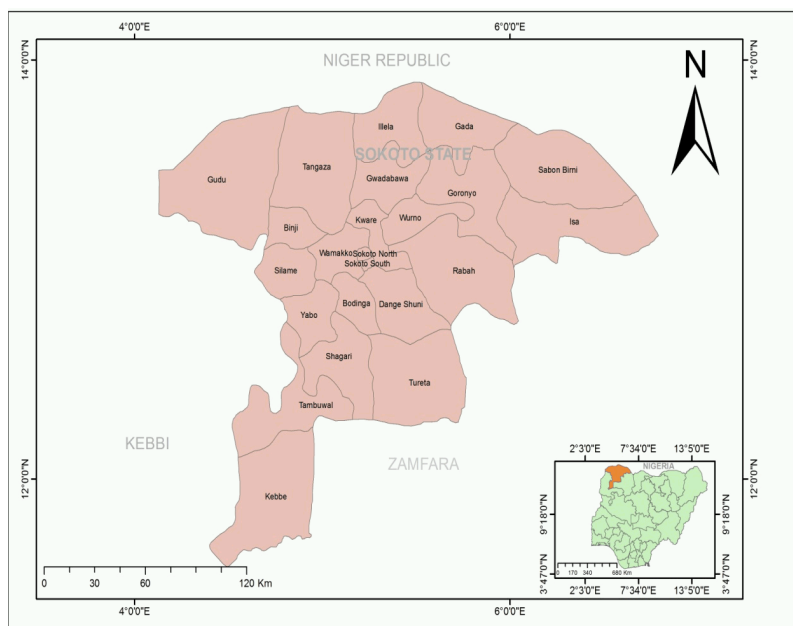


Figure 1. Map of the study location; Source: Hamza et al., (2023).

Research design

This study involved a mixture of collection of primary data through a qualitative survey study design in Sokoto, Nigeria.

Population and sample (target of research)

A survey interview with some respondents (*Almajiri* students) was done on the ways to improve *Almajiri* in Sokoto. Sampling is a method of selecting some participants/ units from the whole population to serve as representatives in the study. In qualitative study, quality of information not the quantity is needed as the main target. Therefore, 180 *Almajiri* in the state capital were selected using purposive non-probability sampling method, that involves selection of respondents based on personal judgement, to generate required saturation (Nasiru, 2015). The questionnaire utilized for this study was a structured questionnaire with different sections. Section A had question on demographic characteristics of respondents, section B had questions on personal hygiene of *Almajiri* respondents, section C had questions on food security of the respondents, section D had questions on living conditions of the respondents, violence and related experience of the respondents.

Data collection techniques and instrument development

The primary data was collected using structured questionnaire.

Data analysis techniques.

The data was managed using frequency count and reported in form of tables and X² test.

3. Result

The result for this work is shown in the tables 1-6.

TABLE 1. Demographic characteristics of respondents

Parameters	Frequency	Percentage	X ²
Sex			
Male	180	100	
Female	0	0.0	
Age			45.
11-15 years	135	66.7	
20 and above	45	33.3	
Marital status			45.
Single	135	66.7	
Married	45	33.3	
Occupation of father			45.
Business	135	66.7	
Farming	45	33.3	
Education			45.
Secondary	135	66.7	
Tertiary	45	33.3	

No of wives			74.028.
1	135	66.7	
3	45	33.3	
No of children of father			
1	70	38.9	
2	60	33.3	
4	50	27.7	

Table 1 shows the demographic characteristics of respondents of this study. As shown by this study, most of the students are 15 years old and below, Hausa/ Fulani, some of their parents are polygamous. All these are in line with the findings related by Zakir et al. (2014) from Kaduna state, Nigeria; Bello et al. (2021) from Gombe and these socio-demographics might be responsible for the involvement of these youngsters in *Almajiri* system of education (Olutola et al., 2021). However, this study shows that the parents of *Almajiri* have some levels of western education, which should have motivated them to enrol their wards in integrated *Almajiri* schools (schools teaching Islamic and western education). And the western education of parents might be why most the *Almajiri* had junior or secondary education (Zakir et al., 2014). As youngsters, *Almajiri* supposed to be under the preservation and support of their parents not in the far away *Almajiri* school if effective socialization and child protection are to be achieved (Bello et al., 2021).

TABLE 2. Condition of schools of *Almajiri* in Sokoto

Parameters	Frequency	Percentage	X ²
School ownership			45.
Donation	135	66.7	
Self	45	33.3	
Building of school			160.
Zinc	60	33.3	
Mud	60	33.3	
Modern	60	33.3	
Presence of urinals		100	
Yes	180		
Overcrowding	180	100	
Presence of window/doors			45.
Yes	135	66.7	
No	45	33.3	
Sitting or sleeping materials			45.
Mats	135	66.7	
Chairs	45	33.3	
Source of risk			45.
Open defecation	45	33.3	
Water	135	66.7	
Stay at school returning home			45.
4 months	135	66.7	
Graduation	45	33.3	

Similar to findings of Zakir et al., (2014) from a Kaduna study, Bello et al., (2021) from Gombe, Nigeria, overcrowding, lack of chairs, practice of open defecation, presence of gutters, lack of self-ownership of indices of poor or threatening environmental health determinants which could harm the health of *Almajiri* students or transcend to affect the public health. Parable, lack of toilet exposes them and the public to infections such as diarrhoea, polio, trachoma, typhoid, etc..... gutters may expose them to injury or encourage the growth of vectors such as mosquitoes (Sarkingobir et al., 2019; Sarkingobir et al., 2020).

TABLE 3. Personal hygiene of *Almajiri* in Sokoto

Parameters	Frequency	Percentage	
Wearing of shoes			45.
Yes	135	66.7	
No	45	33.3	
Nature of teeth			45.
Clean	135	66.7	
Dirt	45	33.3	
Presence of water at school			45.
Yes	135	66.7	
No	45	33.3	
When do take birth?		100.	
Daily	180		
Do you wash hands with soap after toilet?			78.75.
Yes	135	66.7	
No	45	33.3	
Do you wash hands before eating?		100	
Yes	180		

Table 3 shows the personal hygiene of *Almajiri* in Sokoto Personal hygiene is taking care of person’s body, including bathing, washing, hands, brushing teeth, and many more (Alsager et al., 2018). Personal hygiene helps people to protect themselves and those around them against diseases, against millions of microbes that human comes in contact every day (Chaudhari et al., 2015). Results (indicated in table 3) for personal hygiene of this study show that the parameters are mostly positive in majority of the respondents, this might be because respondents reside in the Sokoto city and have opportunity to attend some forms of western education at least at primary and secondary levels. However, this good omen has been contrary to most of the bad conditions reported from *Almajiri* studies (Zakir et al., 2014). For example, Mohammed et al. (2022) reported high prevalence of intestinal parasitosis risk factors attributed to poor personal hygiene of the *Almajiri* in Kaura city, Zamafara state, Nigeria.

TABLE 4. Food security of Almajiri in Sokoto

Parameters	Frequency	Percentage
Daily eating habit		
Once	135	66.7
Twice	45	33.3
Major food		
Gari	60	33.3
Tuwo	60	33.3
Not specified	60	33.3
Source of food		
Begging	60	33.3
External labor	60	33.3
Home	60	33.3

Table 4 shows the assessment of food security of *Almajiri* in Sokoto. Majority of the respondents get food once in a day, through food insecure way (that is begging and labour) and the food is mostly carbohydrate. Likewise, Zakir et al. (2014) findings from Northern Nigeria, Zaria city of Kaduna state have revealed a similar terrain. In turn, this condition) (revealed inn table 4) predisposes many children to tormenting diseases because of inadequate nutrients to properly protect the body against diseases. Many of which spend the little energy they get through begging or labour, therefore making them weak, unhealthy, and vulnerable (Zakir et al., 2014).

TABLE 5. Violence and relations faced by Almajiri in Sokoto

Parameters	Frequency	Percentage	X ²
Type of violence			71.25.
Weapon use	60	33.3	
Fighting	60	33.3	
Flogging	60	33.3	
Do you like Boko			
Yes	135	66.7	
No	45	33.3	
Are you psychologically affected			120.
Yes	180	100	
No			
Level of education			
Ss1	60	33.3	
Jss 1	60	33.3	
None	60	33.3	

Table 5 shows types of violence ever faced by *Almajiri* at their schooling activities. School violence on children is harmful. It can be a source of many consequences on the victim, such as anxiety, depression, physical injury, and psychosis (NRN, 2013). However, the respondents of this study submitted that, they experienced either weapon use or fighting, or flogging as forms violence; and they are touched. Since majority of the respondents attend and love western school, they should be encouraged either through simultaneous attendance or integration approach (Ghorab & AL-khaldi, 2014).

TABLE 6. Suggestions on how to improve *Almajiri* in Sokoto

Parameter	Frequency	Percentage	X ²
Government should integrate <i>Almajiri</i> schools	30	16.7	20.
Government should make laws to compel parents and teachers to treat <i>Almajiri</i> schools like elementary boarding schools	30	16.7	
Preachers/ religious leaders should preach on how to handle <i>Almajiri</i> education properly	60	33.3	
Wealthy individuals shall be compel to pay taxes to improve <i>Almajiri</i>	60	33.3	
Total	180	100.0	

Table 6 shows ways suggested to tackle the issues of *Almajiri* in Sokoto.

4. Discussion

Albeit, every child, including *Almajiri* have rights such as the right to education, health, care, love, adequate food and shelter, live in proper environment; the *Almajiri* suffers (Chukwu et al., 2016; Mohammed et al., 2022). In almost every street, corner, junction, *Almajiri* are seen as nearly homeless, poor, neglected, and maltreated child wandering and begging for alms and food because the society, parents, government, have abandoned the real cause of *Almajiri* education in northern Nigeria (Zakir et al., 2014). Health determinants of *Almajiri* are deemed to be measured because inequalities emerge or worsen during this developmental phase and translate into continuing health problems in the next adulthood life. During young time, is the best time for intervention, investment for individuals to grow and maximize benefits in later life (Currie et al., 2012). *Almajiri* are boys and young men from primary school age to their early twenties who are into cities and villages in Northern Nigeria to study Islamic knowledge, especially Quran (NRN, 2013). *Almajiri* learn to read, write, recite the Quran and relations western subjects are not usually part of their curriculum (NRN, 2013). The *Almajiri* education is traditionally meant to impart intellectual and moral training and even learn any trade available especially for advanced students (Otu, 2006). There is long historic tradition of *Almajiri* education system in Hausa land; where children are taken to areas other than their birth places or homes, and they stayed for years under the care of Islamic scholar, therefore by implication *Almajiri* school is a boarding system of education in Hausa-land which had excelled in the past due to proper set up (Mohammed et al., 2022). However, nowadays the system is facing a lot of challenges some of the challenges reported in the literature pertaining *Almajiri* are enormous, like sleeping and sitting in bare floor, food insecurity, not well-clothed, engaging in child labour (like washing clothes petrol black marketing), begging etc (Mohammed et al., 2022). In this study (as indicated by tables 1-6) because of negligence by the government, wealthy people, parents, and the society at large the condition of the *Almajiri* schools are not satisfactorily (Maigari, 2017;

Mohammed et al., 2022). Most buildings are owned through donations, there is overcrowding, source of risk, and poor environment in general. This was reported by Otu (2006) who finds that the schools have no organized facilities payment of fees was done on parents will, and teachers depend on alms. The major problems of *Almajiri* school are: unfriendly environment, overcrowding, hard labour, inadequate teachers, and inadequate support from the community (Umar & Abdulkarim, 2014). Likewise, NRN (2013) said *Almajiri* schools often lack physical infrastructure, forcing students to sleep in open space, neighbourhood, mosques, shops, place of labour, etc. These have shown that *Almajiri* system is in concern. Where they live had a wide range impact on their early health and mental health relied on having living conditions that are safe and free of physical hazards (Sarkingobir et al., 2020). The substandard houses of *Almajiri* schools have features such as water leaks, poor, ventilation, dirty environment, pest infestation; therefore, diseases can easily occur. Exposure to very high or very low temperature because of lack windows or doors is detrimental to health especially in children. Extreme or low or high temperatures are associated with increased mortality especially in vulnerable children like *Almajiri*. Similarly, overcrowding seen in *Almajiri* schools is associated with physical illness (e.g. tuberculosis, respiratory infections, skin diseases meningitis, steatorrhea etc.) (Robert Wood Johnson Foundation, 2009; Clair, 2019). Children who live in crowded housing have poor cognitive and psychomotor development, are anxious, stressed, aggressive and socially withdrawn (Robert Wood Johnson Foundation, 2009; Clair, 2019). This study has revealed that *Almajiri* students are in food insecurity mayhem. They have no enough food to feed daily they feed on carbohydrates and found food through socially un-acceptable to reports by NRN (2013). Food and Agriculture Organisation of the United Nations, defines physical social or economic access to food for an active healthy life; and the slightest from of food insecurity and undernutrition have long-lasting consequences such as negative effects on learning development (Chilton et al., 2007; Ijarotimi et al., 2018). Malnutrition among children is a global public health problem threatening society nowadays, which is often due to parental poverty, poor parental support, and lack of food availability. Malnourished or food insecure children are vulnerable to diseases and subjected to protein energy malnutrition (PEM), endemic goitre, poor mental development, iron anaemia, and other physical health problems (Sary, 2020). Taking in carbohydrates excessively is presently termed as modern malnutrition, which mediates noxious effects on human health, an event known as carbon toxicity. Carbon toxicity resulting from excessive intake of carbohydrates favours metabolic syndrome, diabetes, obesity, and their co-morbidities as well. The mechanism leading to carbohydrates toxicity is through the high concentration of fructose, glucose, advanced glycation end products (AGEs) (as a result of dihydroxyacetone phosphate and methylglyoxal). Moreover, there is need for the body to import essential amino acids, vitamins, minerals and other vital nutrients (Kroemer et al., 2018; Clemente-suarez et al., 2022).

Type of violence ever experienced includes: weapon use (33.3%), fight (33.3%), and flogging (33.3%). Students asked on whether they like western education, majority (66.7%) replied positively, and (33.3%) replied negatively. All the students are feeling their condition psychologically and some are at SS1 (33.3%), JSSI (33.3%), and some (33.3%) never attend western school. Violence is of great concern anywhere, let alone in schools. The respondents submitted corporal punishment as the violence they faced. Indeed, violence in schools undermines child's security and safety, and expose them to physical, psychological and emotional consequences (Ghorab & AL-khaldi, 2014). Violence against children is never reasonable or acceptable; thus, stakeholders shall protect children against all forms of violence (UNICEF, 2007). Violence can result in risky behaviours such as substance abuse, sexual activity, anxiety, depression, aggressiveness etc. Violence exposure for a long time can cause damage to the brain, then cognitive disorders and relations (UNICEF, 2007). Likewise, corporal punishment has many consequences, are: physical and psychological harm, violation of children's right, teaches violence as a way of resolving conflict or forcing people to do what they are instructed (Council of Europe Publishing, 2007).

5. Conclusion

The most pronounced health determinants observed in this study are: poor living conditions in *Almajiri* schools in Sokoto metropolis, high level of food insecurity, and violence against students. The government, parents, and wealthy people and relations shall join hands to put an overhaul on the problems and challenges faced by *Almajiri* system.

Declarations

Author contribution statement

All the authors contributed in the preparation of study, conduct, collection of data, and preparation of manuscript.

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Data availability statement

Data availability statements provide a statement about where data supporting the results reported in a published article can be found - including, where applicable, hyperlinks to publicly archived datasets analysed or generated during the study.

Declaration of interest statement

No conflicting interest.

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