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# The State of Social Infrastructure in Rural Areas of Katsina State, Northern Nigeria

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**Abstract.** Social infrastructure support sustained both social and economic growth and improved quality and living conditions of the community. Social infrastructures remain the core element of rural welfare. Thus efforts to raise rural welfare must necessarily go beyond the traditional and limited approved of raising per capita income through agricultural development projects to the provision of rural basic needs in term of health and medical facilities, potable water and schools**.** The objective of the research study was to assess the state of social infrastructure (health facilities in particular) in rural areas of Katsina State, Northern Nigeria. The methodology employed by the research is triangulation method in which quantitative and qualitative instruments were used. Data collected was mainly based on primary and secondary sources. The findings of the research study indicate that social infrastructure has an overall average mean of (2.4531) which is low on Likert scale. Social infrastructure (health facilities in particular) in Katsina state, Northern Nigeria is ironically meagre and efforts made to improve them have not yielded desired results. Some of the recommendations of the research study include increase in funding by the government, donor organization and nongovernmental organizations, involvement of the rural populace in the decision making, involvement of the populace in the provision of social infrastructures itself in rural Katsina state, Northern Nigeria.

**Keywords:** Rural Areas, Social Infrastructure.

## 1. Introduction

Social infrastructure support sustains both social and economic growth and improves quality and living condition of the community. Social infrastructures remain the core element of rural welfare. Thus efforts to raise rural welfare must necessarily go beyond the traditional and limited approved of raising per capita income through agricultural development projects to the provision of rural basic needs in term of health and medical facilities, potable water and schools. If developments are to be viable in the long term they need to create places where people want to live and work. Larger scale schemes are likely to require the provision of a wide range of social infrastructure (including health, educational, recreational and other facilities) which is needed to serve the community, thereby enhancing the quality, image and desirability of a new place as well as its commercial value. According to Johnson et al (2005) infrastructure is seen as the productive capital structures that underpin. The economy and society contribute over time to the achievement of its economic and social goals. While Teriman (2011) emphasised that infrastructures are broadly related to basic structures that flow the goods and services between different people and places. In this regard, economic infrastructure and social infrastructure have consequently emerged. Although both economic and social infrastructures have significant social impacts on individuals, communities, and the general public at large in terms of practicality, a distinction between both infrastructures based on their

social impact is ambiguous and difficult to establish (Gilmour et al. 2010).

Duffield (2001) was of the view that the notion of social infrastructure has emerged over the last decade. Heaps of researches have been conducted in India, Australia, Britain, and Hong Kong, China. The domain has emerged mainly due to the fact that public infrastructure is the most apparent form of construction which interests the society at large. Therefore, this subsection thoroughly reviewed the social infrastructure across the literature. Social infrastructure provisions are services delivered by welfare agencies, more commonly known as "human services". The outcome of human service is more difficult to predict as it is dependent on the way staff interpret policies (a factor less significant in economic infrastructure projects) as well as how recipients react to them (Hasenfield 1992). As a result, social infrastructure provision domain expands rapidly, the need to differentiate both infrastructures increases. Fourie, (2006) observed that economists and urban planners distinguish two types of infrastructure, economic infrastructure and social infrastructure. Economic infrastructure are infrastructure that promotes economic activity, such as roads, highways, railroads, airports, sea ports, electricity, telecommunications, water supply and sanitation. Social infrastructure (such as schools, libraries, universities, clinics, hospitals, courts, museums, theatres, playgrounds, parks, fountains and statues) are infrastructure that promotes the health, education and cultural standards of the population activities that have both direct and indirect impact on the welfare. All of these institutions entail capital goods that have some public use. The research study is more concerned with the social infrastructure (health infrastructure in particular).

## 2. Literature Review

Wasley (2009) asserted that social infrastructure are those community facilities, services and networks that help individuals, families, groups and communities meet their social needs, maximise their potential for development, and enhance community wellbeing. Social infrastructure includes, universal facilities and services such as education, training, health, welfare, social services, open space, recreation and sport, safety and emergency services, learning, religious, arts and cultural facilities, civic and democratic institutions, and community meeting places, lifecycle-targeted facilities and services, such as those for children, young people and older people e.g. early childhood centres and retirement villages, targeted facilities and services for groups with special needs, such as families, people with disabilities and people from culturally diverse backgrounds. Just as economic infrastructure, such as roads, energy and ports supports the economy; social infrastructure supports the wellbeing of families and communities especially in terms of health facilities. The construct under health facilities include dispensary, clinic, general hospital, drugs and health employees.

Collins (2001) dispensary is an office in a hospital, school or other institution from which medical supplies, preparations and treatment are dispensed. Oxford dictionary (2003) explains that dispensary is a room where medicines are prepared and provided. Macmillan (2004) viewed dispensary as a place in a hospital where you can get medicines and drugs. In his words, Willey (2010) maintained that it is a room or place in a school, summer camp or factory, where medicine and first aid treatment are available. Houghton (2011) asserted that dispensary is an office in a school hospital or other institution from which medicine supplies, preparations and treatments are dispensed. While Macmillan dictionary (2004) asserted that a clinic is a place where people receive a particular type of medical treatment or advice. American Heritage Dictionary observed that clinic is a facility often associated with a hospital or medical school that is devoted to the diagnosis of one patient. On the other hand Oxford (2003) maintained that clinic is an establishment or hospital department where outpatients are given medical treatment or advice especially of a specialist nature. According to Advanced Learners dictionary (2003) a clinic is a building often part of a hospital to which people can go for medical care or advice relating to a particular condition. Lastly a clinic can be viewed as health care facility that is primarily devoted to the care of

outpatient. It is important to note that clinic can said to be a building or a shop within an organization where people do receive particular type of medical treatment or advice.

General Hospital are regarded as the one having facilities such as medical staff and all necessary personnel to provide diagnosis, care and treatment of a wide range of acute conditions, including injuries, children's general hospital is a short-term hospital having facilities, medical staff and all necessary personnel to provide diagnosis, care and treatment of a wide range of acute conditions among children, including injuries. According to Badru (2003) general hospital include facility that made provisions for accident and emergency unit and diagnosis unit including X-ray, scan machines and other pathological services among other services. The status of being a second layer of health institutions imposes certain acceptable standards and level of infrastructure. According to Medical and Dental Council of Nigeria, there should be a minimum of three doctors who are to provide medical, surgical, paediatric and obstetric care in any general hospital. While Mufflin (2004) asserted that a drug is a substance used in the diagnosis, treatment or prevention of a disease or as a component of medication. According to Dictionary reference.com (2003) a drug is a chemical substance used in the treatment, cure, prevention or diagnosis of disease or used to other wise enhance physical or mental wellbeing. In his contribution Mosby (2009) drugs are any substance taken by mouth, injected into a muscle, the skin, blood vessel or a cavity of the body, or applied topically to treat or prevent a disease or condition. Falex (2012) maintained that drug is an article other than food that is intended for use in the diagnosis, cure, mitigation, treatment or prevention of disease or is intended to affect the structure or function of the body. This term does not include a device or a component part or accessory of a device. Cambridge dictionary (2003) state that a drug is any natural or artificially made chemical that is used as a medicine. A drug is a medicine or other substance which has a physiological effect when ingested or otherwise introduced into the body (Oxford 2003).

While health employees as all people engaged in the promotion, protection or improvement of the health of the population (Adams et al., 2003: Diallo et al. 2003). This is consistent with the WHO (2006) definition of health systems as comprising all activities with the primary goal of improving health. This means that family members looking after the sick and other unpaid caregivers and volunteers who contribute to the improvement of health should also be counted as part of the health workforce, but these are not considered here or in the global database not only for lack of information, but also because of the difficulty it poses with regard to establishing the boundaries of what constitutes a health system.

## 3. Objective of the Study

To determine the state of social infrastructure (health facilities) in rural areas of Katsina State, Northern Nigeria.

## 4. Methodology

The research study employed triangulation research approaches (quantitative and qualitative) in nature. 'This is a technique involved in collecting and analysing data from both quantitative and qualitative strategies (Amin, 2005). It is quantitative because of independent variable are numerical in nature (variable are measured in number). It is Qualitative because it has employed interview as an option of collecting data. The research population, Ary, Jacobs and Razavieh (1972) asserted that a "population" consist of all the subjects you want to study. A population comprises all the possible cases (persons, objects, events) that constitute a known whole. However, a population can be seen as the total of all the individuals who have certain characteristics and are of interest to a researcher. The research population are all rural people in the nine (9) local government areas of the state consisting of 1,517,781 million people (FGNOG 2009). The research study adopts Krejcie and Morgan formula which states that for any sample size of a population greater than 10000 Morgan formula be adopted. The sample size was drawn from a table developed by Krejcie and Morgan, (1970) in Amin (2005).

**Table 1: Respondents of the Study**

| Local Government Areas | Total Target population | | Sample Size | |
|---|---|---|---|---|
| | Target Population | Sample Size | Rural Households | Government Officials |
| Bakori | 149,516 | 38 | 27 | 11 |
| Faskari | 194,400 | 49 | 34 | 15 |
| Jibiya | 167,435 | 42 | 29 | 13 |
| Kaita | 182,405 | 46 | 32 | 14 |
| Kankara | 243,259 | 62 | 43 | 19 |
| Kurfi | 116,700 | 30 | 21 | 09 |
| Mashi | 171,070 | 43 | 30 | 13 |
| Sandamu | 136,944 | 35 | 25 | 10 |
| Zango | 156,052 | 39 | 27 | 12 |
| Total | 1,517,781 | 384 | 268 | 116 |
| Target Population | 1,517,781 | | Sample Size 384 | |

*Source: Researchers' Sample Computation (2015).*

**Table 2: Percentages Distribution of Respondents:**

| Respondent Gender | Items | Frequency | Percentage (%) |
|---|---|---|---|
| | Male | 237 | 61.7 |
| | Female | 147 | 38.3 |
| | Total | 384 | 100.0 |
| **Respondents Age** | 20 - 25years | 106 | 27.6 |
| | 26 - 30 years | 70 | 18.2 |
| | 31 - 35years | 86 | 22.4 |
| | 36 - 40years | 68 | 17.7 |
| | 41 - 45 years | 54 | 14.1 |
| | **Total** | **384** | **100.0** |
| **House hold Size** | 0 – 5 | 252 | 65.6 |
| | 6 – 10 | 86 | 22.4 |
| | 11 -15 | 24 | 6.2 |
| | 16 – 20 | 22 | 5.7 |
| | Total | 384 | 100.0 |
| **Marital Status** | Single | 138 | 35.9 |
| | Married | 246 | 64.1 |
| | **Total** | **384** | **100.0** |
| **Educational Qualification** | Primary Education | 1 | .3 |
| | Secondary Education | 104 | 27.1 |
| | Tertiary Education | 279 | 72.7 |
| | **Total** | **384** | **100.0** |
| **Occupation** | Farming | 73 | 19.0 |
| | Civil Servant | 207 | 53.9 |
| | Trading | 104 | 27.1 |
| | Total | 384 | 100.0 |
| **Nationality** | Nigerian | 384 | 100.0 |
| | **Total** | **384** | **100.0** |

*Source: Field study, 2015*

Findings from the bio data of the respondents indicate that majority of the respondents are males, also majority of the respondents are middle aged and household heads. Similarly, majority of the respondents are literate, civil servants and farmers respectively.

**Table 3: Interpretation of the Level of variables using Likert Scale**

| Mean Range | Response Mode | Interpretation |
|---|---|---|
| 3.27 - 4.00 | Strongly Agree (SA) | Very High |
| 2.50 - 3.26 | Agree (A) | High |
| 1.76 – 2.49 | Disagree (D) | Low |
| 1.00 - 1.75 | Strongly Disagree (SD) | Very Low |

## 5. Data Analysis

**Table 4: Descriptive Statistics of the variables**

| Dispensary | | | |
|---|---|---|---|
| **Items** | **Means** | **Rank** | **Interpretation** |
| Immunization services are available | 2.8698 | 1 | High |
| Dispensaries are available in each village | 2.6068 | 2 | High |
| Health workers are available to attend to patients | 2.5573 | 3 | High |
| Dispensaries are generally sufficient | 2.5234 | 4 | High |
| Clean and hygienic environment are also available | 2.4818 | 5 | Low |
| Size of the dispensaries tallies with the population of the area | 2.4010 | 6 | Low |
| **Average mean** | **2.5733** | | **High** |
| Clinic | | | |
| Immunization services are available | 2.8359 | 1 | High |
| Equipment such as bed, testing aids are available | 2.6198 | 2 | High |
| Clinics are provided at each ward in rural Katsina State | 2.5911 | 3 | High |
| Clinics are generally sufficient | 2.5807 | 4 | High |
| Cases of maternal and child care are treated regularly | 2.5755 | 5 | High |
| Health workers are available to attend to patients | 2.5130 | 6 | High |
| Adequate testing aids are also provided | 2.4375 | 7 | Low |
| Size of the clinic tallies with the population of the area | 2.4297 | 8 | Low |
| **Average Mean** | **2.5729** | | **High** |
| General Hospital | | | |
| General hospitals are provided in each local govt. | 2.7370 | 1 | High |
| Immunization services are available | 2.6849 | 2 | High |
| Doctors are provided in each hospital | 2.5547 | 3 | High |
| Equipment such as bed, testing aids, are available | 2.4505 | 4 | Low |
| Free drugs for treatment are available | 2.4479 | 5 | Low |
| Drugs are also available | 2.4427 | 6 | Low |
| Size of the hospital tallies with the population of the area | 2.3802 | 7 | Low |
| General Hospitals are generally sufficient in number in rural Katsina State. | 2.3333 | 8 | Low |
| **Average Mean** | **2.4039** | | **Low** |
| Drugs | | | |
| Sufficient drugs are available in all government health centres | 2.3307 | 1 | Low |
| Drugs are available at all public health care centres | 2.2630 | 2 | Low |
| The quality of the drugs are efficient and effective | 2.2318 | 3 | Low |
| Drugs are given freely in all government hospitals | 2.1849 | 4 | Low |
| **Average Mean** | **2.2526** | | **Low** |

| Health Employees | | | |
|---|---|---|---|
| They provide efficient and effective services | 2.4583 | 1 | Low |
| Doctors, Nurses, Midwives and attendants are sufficient in number in all government hospitals | 2.4453 | 2 | Low |
| Trained and responsible in discharging their duties | 2.4036 | 3 | Low |
| Doctors, Nurses, Midwives and other attendants are not sufficient in number in rural Katsina State. | 2.2552 | 4 | Low |
| Capacity of govt health employees tallies with the population of the rural areas | 2.2526 | 5 | Low |
| **Average Mean** | **2.3630** | | **Low** |

*Source: Field Study, 2015*

Results from table 4 indicate clearly that under the first construct provision of dispensary in the research study area has an average (mean = 2.5733) which is high on Likert scaling. Likewise the second construct clinic has an average (mean = 2.5729) which is also high on Likert Scaling. This was supported by an interview Musa (2015) *'the present governments do construct clinics in the rural areas of the state'*. The third construct was general hospital which recorded an average (mean = 2.4039) which is low on Likert Scaling. These was supported by an interview Ladan (2015) maintained that *'most of the general hospital didn't have enough doctors and other health personnel'*. The fourth construct was provision of drugs which has recorded an overall (mean = 2.2526) which is low. These were also supported by an interview. Maigoro (2015) maintained *'that government has only one medicine for the eradication of polio and other child killer disease, common paracetamol cannot be found in the government controlled clinics'. 'We make contribution to buy drugs for our dispensary (Liman 2015). 'Drugs were regularly purchased for our village clinic' (Bello, 2015).* The last construct is health employees which recorded an overall average of (mean = 2.3630) which is low on Likert Scaling. These was supported by an interview Zaharadeen (2015) a household head *'an average household in the area opt for private clinics than government owned centres due to the nature of the health employees; they are too harsh to patients'.* Overall average of social infrastructure (health facilities in particular) in the research study has an average (mean = 2.4331).

## 6. Discussion of Research findings

Generally the research study found that social infrastructure (health facilities in particular) was low in the area. To support the findings of the research study Dandago (2003) maintained that couple with the fact that health services (social infrastructural facilities in particular) in the zone are so weak, should be enough for observers to understand why poor social infrastructure in the zone is on the low side. According a technical report by FMOH (2011), maintained that since 2007 government budgetary allocation for health of 6.5% was still far below the target set in the Abuja Declaration of 2001. Three quarters of total health expenditure is borne by households throughout of pocket payments for healthcare. The cost of health care, particularly in the case of obstetric emergency, is one of the most important barriers to healthcare use. Local and state governments also demonstrate a critical lack of accountability, as local governments allocate resources with little influence and oversight from the state. From documented evidence obtained show that Katsina State government has only 150 Doctors, 480 Midwives, 981 Nurses for a population of almost 6 million people (Katsina State Ministry of Health, 2010). Attitudes of health officials towards patients, most health employees or officials engaged in attitudes that drive away patients from government health centres especially in the rural areas of the state.

To further the support the findings of the research study Doctor *et al* (2011) maintained that Katsina which borders the Niger Republic and the Sahara to the north is in this regard typical of states within the zone. Indicators of service access are particularly low with, in 2009, less than 40% of women reporting access to ANC for their last delivery, fewer than 3% of children receiving full immunization by the age of one, and fewer than 15% of women reporting delivery of their last child at a facility under the supervision of a skilled birth attendant. Some international agencies and other internal health institutions maintained that poor health outcomes across the states of Northern Nigeria are, in these terms, unsurprising. The maternal mortality ratio (MMR) for the North-West zone of Nigeria is estimated at over 1,000 per 100,000 live births Centre for Reproductive Rights and Women Advocates Research and Documentation Centre (2008); Federal Ministry of Health of Nigeria et al. (2009). Most recent estimates of infant mortality and under-five mortality rates for the zone are 91 deaths per 1,000 live births and 139 deaths per 1,000 children age 12 - 59 months respectively (NPC [Nigeria] and ICF Macro 2009).

Although it is generally acknowledged health delivery and range of health services, studies suggest they can provide necessary health services with reasonable efficacy in areas that lack the infrastructure for permanent health centres. Although improved health outcomes may be reported, impact is dependent upon the completeness of clinic services and the regularity of their availability (Fox-Rushby and Foord 2006). Onokerhoraye (2006) rightly noted, one of the most significant development problems in Nigeria as in other parts of the developing world is the lack of adequate health facilities in various parts of the country. However, the problem of inadequate health facilities is aggravated by the persistence of regional inequalities in the distribution of the available health institutions. The geographical disparity in the provision of health facilities is most severe between urban and rural areas. Although, the vast proportion of the population of Nigeria still lives in the rural communities, yet in terms of health facilities, these are the most neglected segments of the population. According to the National Bureau of Statistics, (2005) very few members of households cared to consult any health provider in a two week period. Only 7.64 percent made any formal consultation.

## 7. Conclusion

Social infrastructure (health facilities in particular) in Katsina state, Northern Nigeria is ironically meagre and efforts made to improve them have not yielded desired results. This is as a result of many factors such as poor funding on the part of the government to controlled health centres. Another reason is attitudes of the community's, towards provision of such facilities, households, associations, practitioners and other development partners in the area are not fully mobilise and engaged in the provisions of such facilities. It was also established that there is inefficient drugs, poor administration of the drugs and so on. The research study would stress the value of genuine community health sector partnerships to develop health services for rural communities in Katsina State, Northern Nigeria in collaboration with rural community development associations. However, governments, practitioners, rural community development associations and health systems in the area must recognise and accept that provision social infrastructure (health facilities) in particular requires a long-term and consistent investment.

## 8. Recommendations

Provision of adequate dispensaries at all levels should be improved especially in the rural areas of the state. These would along way to provide a healthy society; a healthy society equally means a healthy nation with economic prosperity. This can be done through the use of government agencies like Ministry of Health, Rural Community Development Associations, and community groups and so on in rural areas of the state.

Provision of adequate clinics should be made possible by both government and nongovernmental organizations and other development partners especially by engaging the locals. This can be achieve by involving locals like rural community development associations in projects initiation, implementation and even evaluation. It is only through engaging locals that the programme can achieve its objectives.

Drugs should be provided at all governmental and nongovernmental health centres. Through government agencies, rural community development associations, drugs can be provided (contribution by the local people, supplying the drugs and even distribution). These would no doubt promote a healthier society which means a productive society. Increase funding of governmental and nongovernmental health centres these would go a long way in producing in healthy environment. No nation or community can survive without a healthy environment. Increase in funding would equally boost the availability of social infrastructure (health infrastructure) in the rural area of Katsina state, northern Nigeria. Increase investment in social infrastructure at all levels especially health infrastructure such as dispensaries, clinics, general hospital, drugs and so on. These can be achieved through collaboration between government and local or

rural community development associations, groups, religious bodies in the area.

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