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Health Impact of Community Self-Help Projects on the Overall Health of The People of Khana Local Government Area: A Survey of Communities in Khana Local Government Area of Rivers State, Nigeria (2013 – 2024)

Harry, Patricia Gad N.[1]; Imikan, Augustine Michael[2]; Onwuchuruba, Annunciata Chilee[3]; & Gbarabe Zor Nnaa[4]

[1]Department of Community Health Nursing, Federal University Otuoke Bayelsa.
[2]Department of Geography and Natural Resources Management, University of Uyo, Akwa Ibom State.
[3]College of Nursing Sciences, University of Port Harcourt Teaching Hospital, Port –Harcourt, Rivers State.
[4]National Open University of Nigeria (NOUN).

***Corresponding Author**: Harry, Patricia Gad N.
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Abstract

The idea of self-help and communal assistance which forms the basis of the present-day community and rural development among the rural dwellers is deeply rooted in the rich traditions of the African. This study investigated the health impact of community self-help projects on the overall health of the people: a survey of communities in Khana Local Government Area (2013 – 2024). This study employed descriptive survey design with a purposive sampling technique. The target population was One hundred and ninety-six (196) community members. The sample size was one hundred and sixty-nine (169) representing 86% of target population, selected using the purposive sampling technique. Participants were interviewed and questionnaires were distributed to elicit usable information. Survey of community self-help projects were carried out. For reliability, test-retest method was adopted at Eteo community in Eleme LGA, which was outside the LGA under study. Collated and analyzed data using Cronbach Alpha gave index of 0.80 instrument reliability. The questionnaires were administered and later retrieved from the respective villages. The data collected were presented using mean, and z-test at 0.05 level of significance. The result showed that to high extent, constructed road network led to improved access to health facilities (M = 2.97), enhanced transport of clean water, foods and healthcare supplies (M = 3.07) and create more income to enable healthcare to be afforded (M = 3.18). Prevention of burns and poisoning had a mean rating of 2.59, while SD is 0.90. Improved safety and reduced injuries showed mean rating of 2.80, while SD is 0.94. Extended hours for health services had a mean rating of 3.15. It was concluded that, communities in Khana LGA have been undertaking self-help projects for sometimes. The implication of the finding is that the establishment of community self-help projects has contributed to solving rural problems with the present of facilities constructed road networks, and solar light projects. It was recommended among others that, Stakeholders (government, community and development partners) should improve on the existing roads network to enable patients and emergency cases quick access to health centers in the rural communities.

Keywords: *Health, Impact, Self-Help Projects, Khana LGA.*

Introduction

Attracting and retaining oversea students has long been a key focus of modern higher education policy, but the notion of self-help and cooperative action is woven into the fabric of many African traditional systems. Building projects within rural communities, ranging from road construction and bridge building to health facilities, markets and palaces to houses have traditionally been a development issue that is practiced through collective action. That tradition

reinforces the continued relevance of community participation as a driver of development. According to Ugwu and Aruma (2019), the implications for public health in many developing economies underscore self-help initiatives and community participation as effective sustainable development strategies. In line with this, Thapa and Rasul (2021) also state that efforts like these play an important role in economic growth through employment, alleviation of poverty, provision of better infrastructure, access to credit, improved food security and health outcomes.

Idachaba (2016) sees rural development not only as expansion of agricultural output and overall economic growth, but also equitable distribution of the social and economic benefits. Further, Karim et al. from 2017 call it a systematic process of organizing rural communities to strengthen their ability to address socio-economic challenges. In this context, self-help is a type of participatory approach which accommodates communities to actively engage in planning and implementation of development projects. This represents a paradigm shift from the previous policies which were solely targeted towards increased agricultural production to more comprehensive strategies directed at poverty alleviation, quality of life and health and well-being. Mammud (2019) observes that self-help is a prerequisite to rural development, as it serves as a bridge connecting the poor with necessary services including but not limited to pure water, electricity, healthcare systems, employment sources and transportation infrastructure which altogether improves the living standards.

Background: Community self-help initiatives have been found to greatly enhance the health status of residents in Khana Local Government Area. Conclusion: Health interventions in rural areas cannot achieve sustained impact on health outcomes unless they receive proper community engagement and mobilization by structuring the health programmes such that the communities take equal part in planning and implementing these by involving them. By being locally driven, culturally appropriate and promoting sustainability over time It also underlines the importance of community ownership and participation as key elements in successful rural health development.

As such, all levels of government should deem inclusive strategies targeting rural populations in the execution and decision making of health programmes as part and parcel of a democratic development process. Its participatory model of health appreciates that the delivery of care is not exclusively the job of government institutions, but must also be co-performed by communities themselves. Community self-help can supplement formal health systems and augment the efficacy of healthcare delivery in rural and urban settings by fostering collaboration between public authorities and local populations.

Rural dwellers have poor perception of self-help projects that would enhance their well-being. In most cases, community members felt that community-based organization like Community Development Committee (CDC) initiating project is just a means of enriching the members. Thus, there is poor participation by community members in contributing towards community self-help projects in rural communities. Mammud (2019) stated that the conditions and degree of self-help projects embarked upon by the communities are of poor qualities resulting in affecting the positive health impacts such projects should have on the community members. Because of the poor quality of community self-help projects, the sustainability of the projects is stymied, making it difficult for such projects to outlive its present generation. Funding self-help projects in rural communities constitute huge burden on members of the communities as they are tasked multiple times in order to achieve completion of the project. In some cases, community members refused or protested against such multiple levies thereby halting a social responsibility. The social action theory is compromised. The study provided answers to the following research questions:

1. What are the health impacts of community constructed road network on the overall health of the people of Khana Local Government Area?
2. What are the positive health impacts of solar light projects installed by the community on the overall health of the people of Khana Local Government Area?

Methodology

This study employed descriptive survey design with a purposive sampling technique. The target population was One hundred and ninety-six (196) community members were drawn from among CDC, youth council, traders, farmers, social organizations, philanthropists, experts, opinion leaders, chiefs, households and, elders in Khana LGA. The sample size of this study is one hundred and sixty-nine (169) representing 86% of target population. The sample size was selected using the purposive sampling technique. This was done by selecting 52 respondents in Ken-khana; 50 in Babbe District and 67 in Nyo-khana because it has more self-help projects. The primary and secondary sources of data collection were employed. Participants were interviewed and questionnaires were distributed to elicit usable information. Survey of community self-help projects were carried out. The instrument was structured on 4-point Likert rating scale of very high extent, (VHE); high extent (HE); Low extent (LE); very low extent (VLE). For reliability, test-retest

method was adopted at Eteo community in Eleme LGA, which was outside the LGA under study. Collated and analyzed data using Cronbach Alpha gave index of 0.80 instrument reliability. The questionnaires were administered and later retrieved from the respective villages. The data collected were presented using mean, and z-test at 0.05 level of significance. A weighted mean of 2.50 indicate acceptance of research question, while the null hypotheses would be rejected if the test statistics (z-calculated value) is greater than the z-critical value of 1.96 or less than -1.96.

Results

The results of the study are shown below:

Table 1: Mean rating and Standard Deviation of respondents on health impacts of community constructed road network on the overall health of the people of Khana Local Government Area, Rivers State.

	Respondents - 169		
Projects	**$\overline{X}$**	**SD**	**Remarks**
Improved access to health facilities	2.97	0.34	high extent
Enhanced transport of water, foods etc	3.07	0.33	high extent
Create more income to afford healthcare	3.18	0.31	high extent
Outreach and vaccination in remote areas	3.11	0.32	high extent
Grand Mean and Standard Deviation	**3.08**	**0.33**	**high extent**

Field work report, 2025.

From the table 1 above, improved access to health facilities, mean rating indicates 2.97 and SD is 0.34; on enhanced transport of clean water, foods and healthcare supplies, mean rating is 3.07 while SD is 0.33; on create more income to enable healthcare to be afforded, mean rating is 3.18, while SD 0.31; on outreaches and vaccination in remote communities, mean rating is 3.11 (which showed greater reason factor for community members embarking on self-help projects), while SD is 0.32. Various mean scores were accepted with grand mean of 3.08 (above 2.50 mean criterion) and overall SD is 0.33 showing that community constructed road network impacts positively on the overall health of the people of Khana Local Government Area.

Table 2: Mean rating and Standard Deviation of respondents on the positive health impacts of community installed solar light on the overall health of the people Khana Local Government Area, Rivers State.

	Respondents - 169		
Projects	**$\overline{X}$**	**SD**	**Remarks**
Reduced indoor air pollution	4.15	0.90	high extent
Prevention of burns and poisoning	2.59	0.90	high extent
Improved safety and reduced injuries	2.80	0.94	high extent
Extended hours for health services	3.15	1.71	high extent
Grand Mean and Standard Deviation	**3.17**	**1.17**	**high extent**

Field work report, 2025.

The table showed that the mean rating of reduced indoor air pollution health is at 4.15, while SD is 0.90. Prevention of burns and poisoning had a mean rating of 2.59, while SD is 0.90. Improved safety and reduced injuries showed mean rating of 2.80, while SD is 0.94. Extended hours for health services had a mean rating of 3.15 while the SD was 1.71. A grand mean of 3.17 and SD of 1.17 was above the set out mean criterion of 2.50 making the data acceptable. The grand SD is 1.17.

Testing of Hypothesis

H_o: There is no relationship between self-help projects and health impact on the overall health of the people of Khana Local Government Area of Rivers State, Nigeria.

Table 3: z-test comparison of the Mean Responses of positive health impacts and community self-help projects

Respondent	**N**	**Mean ($\overline{X}$)**	**SD**	**df**	**z-cal**	**z-crit**	**remarks**
Respondents	169	2.94	1.38	169	0.37	1.96	rejected

P > 0.05

Result of z-test on table 4.5 showed the z-calculated value of 0.37 was less than the z-criterion value of 1.96 at 0.05 level of significance. This means that the null hypothesis there is no relationship between positive health impacts and community self-help projects on the overall health of the people of Khana Local Government Area

Discussion of Findings

The findings of the study were discussed below:

The construction of community roads network has been said to have wide range of positive health impacts both the people and environment. Positive health impacts resulting from construction of roads network are improved access to health services that create better emergency response times due to improved connectivity and easier transport to clinics, hospitals, and pharmacies especially in rural areas; Enhanced physical activity as roads that are pedestrian or bicycle- friendly encourages walking and biking and may contribute to reduced rate of obesity, cardiovascular diseases and diabetes; Improved access to food market that made it easier to transport fresh produce and other essentials that can reduce malnutrition and food insecurity; Reduced isolation and improved mental health as it can reduce social isolation particularly for elderly or marginalized groups and improved community cohesion and mental well-being (Obi et al., 2024). Dooris & Heritage (2017) agreed with the position above when the duo stated that social infrastructure such as roads, water, energy and health facilities, etc. contributed greatly to rural development.

Solar energy improves air quality and reduces pollution, benefiting public health. Community solar projects make clean energy accessible to low-income households. Successful solar initiatives around the world are inspiring models. The positive health impacts include: improved air quality: which reduces reliance on fossil fuels, decreasing air pollution and respiratory illnesses like bronchitis, and asthma. Clean air leads to fewer health problems especially for vulnerable populations like children and elderly and those with pre-existing respiratory conditions. Reduced indoor air pollution: Solar powered homes and buildings can significantly reduce indoor pollution by powering ventilation systems and air purifiers, improving respiratory health and overall well-being. Mental benefits: create access to renewable energy like solar power can have psychological benefits, enhancing feelings of security and well-being. Reduced stress from energy insecurity and improved living conditions contribute to better mental health outcomes. Increased energy access: community solar projects provide energy access to remote and underserved areas improving healthcare services, education and economic opportunities. This increased access enables communities to thrive and improve overall quality of life. Job creation and economic growth: Solar projects create local jobs and stimulate economic development, contributing to improved living standards and reduced poverty. This economic stability positively impacts public health and well-being. Water and sanitation: Solar powered water pumping systems improve access to clean water, reducing water borne diseases and enhancing community health. Improved vaccine cold cold-chain maintenance and immunization coverage: Solar power in health facilities enables reliable refrigerator for vaccine potency and availability (UNICEF, 2022). Imarisolar (2025) is also in support of the above views as it outlined the benefits of solar light to include cost-effective lighting solution, reliable power during blackout, improved safety and security and environmentally friendly. Ibim and Nwika (2025) noted that solar light is extended and provides more reliable hours of operation for health clinics by allowing clinics in remote areas to operate at night or during grid outages. This increases the capacity for emergency management, child birth at night, etc. In Kaduna according to emergency services and deliveries improved after the installation of solar electrification. Reduced mortality and morbidity from vaccine-preventable diseases: because vaccines are stored properly, immunization coverage improves, reducing disease incidence. Solar power helps maintain essential equipment even during outages (Ugbebor & Ntesat, 2019). Imarisolar (2025) said that improved safety, lighting and better outcomes at night occurred and that with solar lights, clinics are safer at night, safer delivery conditions, patients with emergencies can be treated even after dark. Night time lightening also helps staff work more safely.

The research null hypothesis that community self-help projects have no effect on positive health outcomes among residents of Khana Local Government Area, Rivers State was rejected. It shows within the context of community-driven (q.v.) activities, large improvements to health or to broader determinants of quality-of-life take place. The impact may also represent the capacity of self-help projects to provide not only better access to health infrastructure, but also a cleaner environment and general community improvement. The results are in agreement with Mammud (2019) who revealed that community-based projects, especially in health and infrastructure had a significant impact on rural development and health outcomes among the studies carried out under Ondo East Local Government Area.

In addition, the statistical evidence further corroborated this conclusion as the computed z-value (0.36) was less than value of the critical z at level of significance 0.05 (1.96) for which null hypothesis is rejected. This is indicative of the

fact that there exists a considerable association between community self-help projects and better health effects in the study site. We conclude that the findings call for policies and strategies that motivate continuity in community participation such as provision of incentives to promote local participation through planning, implementation and maintenance of development projects. These efforts would reinforce the efficacy and durability of self-reliance remedies to advance well-being changes in rustic settings.

Conclusion

Findings indicated that the people of Khana Local Government Area had been involved in series of self-help efforts to tackling local development problems over the years. Such initiatives have commenced alongside the provision of some basic infrastructure such as road network and solar lighting systems in other efforts desperately needed to drive living standards upwards. They find out that the above community-led projects have, to some level mitigated a few well-being challenges in these communities. There is also evidence that residents have been instrumental in establishing important facilities including health centres, civic halls, rural water supply systems as well as bridges or culverts and therefore affirming the critical contribution of self-help projects to supporting rural development and improving the quality of life.

Recommendations

The following recommendations were made based on the findings of the study:

- Stakeholders (government, community and development partners) should improve on the existing roads network to enable patients and emergency cases quick access to health centers in the rural communities.
- The State and Local Government should provide more health facilities and refurbish existing ones to meet medical needs of rural people.
- Stakeholders (government, community and development partners) should provide more solar lights particularly to cater for health equipment and others in the rural communities.

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