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THE IMPACT OF SANITATION, HYGIENE, WATER DISEASES PREVENTION AND CHILDREN'S HEALTH

By

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Abstract
The Sanitation Hygiene and Water (SHAWN) Programme came up because of the importance of sanitation and water on the health of children and the society generally. However, it has spread across many nations facing the challenges of sanitation, poor hygiene practices and water. The programme was aimed at curbing open defecation, promote hand washing, bridge the knowledge gap on hygiene practices and ensure the society stayed healthy. With the prevalence of community-related diseases, access to improved sanitation systems, healthy hygiene practices and clean water are primary to stopping the spread of diseases. Action in the SHAWN sector is therefore critical to containing these diseases. It is against this background that this paper examined the impact of Sanitation Hygiene and Water in Nigeria (SHAWN) on the prevention of these diseases on children using WARJI Local Government Area of Bauchi State as case study. The theory of Neo-functionalism was adopted as the theoretical premise. The research method employed is both quantitative and descriptive. Information was obtained through primary and observatory survey. Questionnaires were administered and relevant literature were reviewed. Findings showed that adequate sanitation together with good hygiene and safe water has enabled the reduction in Sanitation Hygiene and Water related diseases that affect children's health because the environment is now open defecation free and clean. If the SHAWN solution is implemented fully, it would promote good Sanitation, Hygiene practices and raise the health standard and wellbeing of children as well as reduce their diseases infection.

***Key Words**: SHAWN, WASH, Children, Health, UNICEF.*

Introduction

The importance of children's health cannot be overemphasized and children cannot achieve optimal health alone. They are dependent upon adults in their family and community to provide them with an environment in which they can lean and grow successfully. According to Bevan's, Riley, Moon and Forrest (2011), children's health is the extent to which children or group of children are able to or enabled to develop the capacities that allow them to interact successfully with their biological, physical and social environments,

As the Sanitation, Hygiene and Water related diseases spread across some countries in Africa, many countries in the region suffer from in-accessibility to clean drinking water and open defecation is prevalent. Adequate sanitation together with good hygiene and safe water, however represent an effective health intervention that reduces the mortality and morbidity caused by Sanitation Hygiene and Water related diseases. With the high rate of population explosion, rural-urban migration, wars, refugee migration and natural disasters ravaging the world today, poor hygiene practices and water supply need to be tackled head on.

In Nigeria for instance, Children and community members generally fall ill and die as a result of lack of adequate sanitation, poor hand washing practices and so on. Getting clean water is an issue due to contamination of water supplies, and this is worsened by increase in population and behaviour of many Nigerians (Eneji, Eneji, Asuquo & Ubom, 2015).

In many communities, open defecation is still being practiced, people build houses without water channels which causes flooding, hand washing is not taken seriously only when Ebola and Lassa fever breaks out, water is not treated, people defecate in rivers and still fetch the water to drink and schools do not take SHAWN education seriously.

Conceptual Clarification

The National Demographic Health Survey NDHS (2013) report that 28.7 percent of population practiced open defecation while 37.3 percent were using unimproved latrines. Only 59.6 percent of the population had access to the improved sources of drinking water, while 34 percent were using improved sanitation facilities (UNICEF, 2015). In Warji LG Area of Bauchi state, prior to the inception of SHAWN programme through The United Nations Children's Fund (UNICEF), an International Organization, the case was not different. Children were reported to fall ill frequently in households; access to clean drinking water was difficult, open defecation in public places was prevalent due to in-accessibility to latrines, personal hygiene practices, most especially hand washing was poor and schools lacked SHAWN facilities.

Action in Sanitation Hygiene and Water sector, also known as SHAWN, is therefore critical to containing the diseases. SHAWN's core - improved sanitation systems, implementing healthy hygiene practices and providing access to clean water – lowers the infection rate and builds communities' ability to ward off infectious disease outbreaks.

It is against this background that this paper examined the Impact of Sanitation Hygiene and Water diseases prevention and children's health, using Warji LG Area of Bauchi State as case study.

Theoretical Framework

This paper adopts the Neo-functionalism theory, which was first propounded in the late 1950's by scholars like Ernest Hass, Leon Lindberg and Philippe Schmitter. Neo-functionalism provides an explanation to the logic and dynamics of integration amongst states and the consequences of such conditions on inter-state relations as well as development.

The theory is relevant to this study to explain the manner in which development partners under International Organizations with the Federal, State and Local Government in Nigeria collaborated and cooperated to tackle the problem of SHAWN in Warji Local Government Areas of Bauchi State.

Due to the importance of SHAWN, a goal under the Sustainable Development Goals (SDGs) was specifically dedicated to WASH, that is goal number six which is "ensuring access to clean water and sanitation for all". The attainment of SDGs goal six is dependent on solving the problem of WASH globally by bridging the knowledge gap on WASH, changing the behaviour and attitude of people towards WASH practices, through educating and sensitizing them on best WASH practices. Such poor WASH practices are open defecation, drinking of untreated water, poor hand washing and poor personal hygiene.

Data Presentation

This study employed the use of survey research design to collect the needed data. The target population consists of adults in the study area. In communities where houses are not lined in streets, the respondents were randomly selected applying selection intervals starting from the household of the community leaders. The selection interval was determined by dividing the household population per community by the sample size of the community. The research method employed in this paper is both quantitative and descriptive. Based on data required, information was obtained through primary and observatory survey. 90 copies of the questionnaires were administered to elicit information required while 85 (94%) were retrieved and deemed to be valid for analysis using descriptive statistics such as percentages, frequencies and tables.

Sample size of Ward, Communities, Households and Selection Intervals in Warji LG Area of Bauchi State

Table 1: Study Area in Warji LG of Bauchi State.

S/NO	WARD	COMMUNITIES SAMPLED	NUMBER OF HOUSE HOLDS	SAMPLE SIZE		SELECTION INTERVAL
				Administered	Retrieved	
1	Zurgwai	i. Zurgwai Tudu	111	3	3	37
		ii. Labune II	101	4	4	25

2	Dagu	i.	Unguwar Malamai	300	4	4	75
		ii.	Sosayi	38	3	3	12
3	Baima	•	Duguniya	201	4	4	50
		•	Bulgana	190	3	3	63
4	Tiyin"A"	i.	Koki	156	4	2	39
		ii.	Aru Tudu	200	3	3	66
5	Tiyin "B"	➢	Khan	149	4	4	37
		➢	Biza	156	3	3	52
6	Tudun Wada	i.	Kofar Sarki	149	3	3	49
		ii.	Jola	95	3	3	31
7	Katanga	i.	Tudun Alheri	250	3	3	83
		ii.	Dagu Sabuwa	154	4	4	38
8	Gabanga "A"	i.	Kadale kofar Sarki	109	3	2	36
		ii.	Hardo Gajan	50	4	4	12
9	Gabanga "B"	i.	Buran Kwari	200	4	4	50
		ii.	Zalangwa	58	3	3	19
10	Dallaji	i.	Sabon Gari	60	4	3	15
		ii.	Wuha	70	3	3	23
11	Ranga "A"	i.	Dansai	110	4	4	27
		ii.	Yamma Dansai	140	3	3	46
12	Ranga "B"	i.	Gamudona	116	4	3	29
		ii.	Dawatsi	156	3	3	52
13	Wando	a.	Ganjin Zaki	103	4	4	25
		b.	Baure	150	3	3	50
Total	**13**	**26**			**90**	**85**	

Source: Field Survey, 2019.

Result and Discussions

Below are the responses to the question on the common diseases that affected Children in the community before WASH intervention.

Table 2: Common Diseases of Children in the area

Response	Frequency	Percentage
No response	4	5
Diarrhea and other water related diseases	33	39
Cholera, skin diseases, malaria, measles, fever and other poor sanitation, hygiene related diseases	40	47
No idea	2	2
Poor hygiene	6	7
Total	**85**	**100.0**

Source: Field Survey, 2019.

Table two above shows that 5% did not respond, 39% responded that diarrhea and other water related diseases affected children before WASH programme. 47% responded that cholera, skin diseases, malaria, measles and fever were the common diseases in the community before WASH, 2% gave No idea as their response, while 7% gave poor hygiene as their response. One can observe from the table that poor sanitation and hygiene related diseases are the common diseases that affected children, from the response above.

Table 3: Disposal of Waste Water Generated in the Household before WASH Intervention

Response	Frequency	Percentage
No response	3	4
Throw on the streets	53	62
Within the courtyard	20	24
Throw into the gutter	9	10
Total	**85**	**100.0**

Source: Field Survey, 2019.

Table three above shows that 4% did not respond 62% responded that they disposed of the waste water generated in their household into the gutter. 24% responded that they disposed of their waste water in their courtyard while 10% responded that they throw their waste water into the street. The highest response of their throwing waste water on the street can generate serious health hazard for the vulnerable children.

Table 4: Disposal of Household Refuse after WASH Intervention

Response	Frequency	Percentage
No response	4	5
Nearby stream	25	29
Gutter	10	12
Dump site	40	47
Courtyard	6	7
Total	**85**	**100.0**

Source: Field Survey, 2019.

Table four above shows that 5% of the respondent did not respond, 29% gave the response that they dispose their household refuse in a nearby stream. Another 12% responded that theirs is thrown into the gutter. 47% responded that they use the dump site, while 7% responded that they dispose their household refuse in their courtyard. The highest percentage above indicate that after WASH intervention, majority of the community members dispose their refuse at a dump site.

Table 5: Excreta Disposal Facilities after WASH Intervention

Response	Frequency	Percentage
No response	2	2
Sato toilet	61	72
Open field (bush) defecation	6	7
Pour flush latrine	11	13
Chamber pot	5	6
Total	**85**	**100.0**

Source: Field Survey, 2019.

Table five above shows that 2% of respondents did not respond. 72% responded that they use sato (Improved latrine) in their household, 7% responded that they engage in open field (bush) defecation. 13% responded that they use pour flush latrines (Improved latrines), while 6% responded that they use chamber pot in their households. The response above shows that majority of the community members use the sato latrine which is more hygienic, affordable for them, and also much better than pit latrines.

Table 6: Type of Hygiene Facilities in Schools after WASH Intervention

Response	Frequency	Percentage
No response	3	4
VIP latrines, tippy taps, hand pumps, Sato toilet, boreholes.	65	76
Soap/ash, water and kettle	9	11
Hand washing sanitizer	8	9
Total	**85**	**100.0**

Source: Field Survey, 2019

Table six above shows that 4% did not respond to the question. 76% responded that VIP latrines, tippy taps, hand pumps, Sato toilet and boreholes are the types of hygiene facilities available in schools. 11% responded that soap and ash, water and kettle are the hygiene facilities they have in schools, while 9% responded that hand washing sanitizer is the hygiene facility they have in the schools. The highest response above indicates improvement in the hygiene facilities, which will safe guard the health of everyone in the community.

Table 7: **Impact of SHAWN on Infant/Child Mortality and Morbidity**

Response	Frequency	Percentage
No response	4	5
Negative	6	7
Highly negative	5	6
Positive	53	62
Highly positive	17	20
Total	**85**	**100**

Source: Field Survey, 2019.

Table seven above shows that 5% of the respondents did not respond. 7% responded that the impacts of the programme are negative. 6% responded that the impact of the programme is highly negative. 62% responded that the impact is positive while 20% responded that the impact of the SHAWN programme on the health of the children and the community generally in terms of reduction in Infant/Child Mortality and Morbidity is highly positive.

Table 8: Cumulative Sanitation, Hygiene and Water Related Diseases Cases Reported from the Health Facilities in Warji Local Government Area from 2009 – 2018

S/NO	DISEASES	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
1	TYPHOID FEVER	4386	3915	1850	1753	2206	2789	2617	1825	3140	1837
2	PNEUMONIA	2002	16333	419	490	694	930	939	1057	1458	1562
3	DIARRHEA	4386	3713	1130	1246	1709	2084	2200	2316	2771	3544
4	HIPATIS B	31	23	15	22	20	38	14	24	11	14
5	G/WORM	277	284	195	211	19	0	0	0	0	0
6	CHOLERA	728	674	579	256	0	0	0	0	0	0
7	HELMENTHTIS	0	0	0	0	0	0	0	19	87	200
	TOTAL	**11810**	**24942**	**4188**	**4078**	**4648**	**5841**	**5770**	**5241**	**7467**	**7157**

Source: Integrated Disease Surveillance and Response (IDSR) 003 Manual (Warji LGA), 2019

As part of the impact of the programme on diseases prevention and children's health, there is a highly positive reduction in the occurrence of diarrheal/sanitation hygiene and water related diseases, which we can observe in table 8 above, where we have the sanitation hygiene and water related cases from the health facilities in Warji LGA. The table shows the impact of the programme on children's health with drastic reduction in the diseases (diarrheal, typhoid, fever, cholera, guinea worm, among others) during and after the implementation of the programme. This has also led to the positive impact of the programme on infant/child mortality and morbidity, as we can see from the response of the 62% of respondents on table 7.

Summary and Conclusion

According to Eneji,Eneji,Asuquo and Ibom (2015), the overall objective of UNICEF in the area of water, sanitation and hygiene is to contribute to the realization of children's rights to survival and development through promotion of the sector and support to national programmes that increase equitable and sustainable access to, and use of safe water and basic sanitation services and promote improve personal hygiene.

Some studies carried out by authors such as Adeleye, Madayese & Okelola (2014), Brown, Cairncross & Ensink (2013) appraised the impact of the WASH intervention programmes by focusing on common WASH problems which cuts across different countries and different states in Nigeria. Empirical evidences have shown that some of these programmes lack effectiveness in producing its desired outcomes on the health of children and community members generally. For the programme to be sustained, it has to be effective in order to guarantee optimal outcomes. This study investigated the SHAWN programme in Warji LGA of Bauchi State and observed its effectiveness on Sanitation Hygiene and Water diseases prevention and children's health in terms of adoption of good sanitation and hygiene practices, and consumption of clean/safe water, which is part of the primary objectives of the programmme. Also, the collaboration between UNICEF, The Federal, State and Local Governments, through their integration as seen in their available counterpart funding and cooperation, enabled visible positive impacts of the SHAWN programme.

Investments in improved Sanitation Hygiene and Water infrastructure is a public health priority for communities and countries, as it significantly contributes to reduce ill health and has impacts on Sanitation Hygiene and Water-related epidemics which are a major economic drain.

In conclusion, the positive impacts of the SHAWN programme has enabled the reduction in the occurrence of infectious diseases in the communities, raised the adoption of good hygiene practices and the health standard of children.

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