

Education:

EFFECT OF HEALTH EDUCATION INTERVENTION ON KNOWLEDGE AND ACCESSIBILITY OF DELIVERY CARE SERVICES BY WOMEN IN EDU, KWARA STATE, NIGERIA.

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ABSTRACT

Even with the best possible antenatal screening, any delivery can become a complicated one requires emergency intervention. This study aimed to examine effectiveness of health education on knowledge and access to Delivery Care services among women in Edu Local Government Area of Kwara State, Nigeria. A quasi-experimental research of pre-test and post-test control group design was adopted. The ethical approval was sought from the leaders/Local Government Authority of the study areas. Researchers-designed questionnaire was used for data collection and split-half test of reliability was used to determine its reliability. One hundred and twenty pregnant women were exposed to ten weeks health education intervention after pre-test, 60 experimental group exposed to lectures on antenatal care services and 60 control group exposed to environmental sanitation HEI sessions, followed by post-test. The descriptive statistics was used to answer research questions while inferential statistics of t-test was used to test hypothesis at 0.05 significant levels.

The result showed a significant improvement in knowledge on delivery care services from pre-intervention mean scores of 67.70 to post intervention mean scores of 95.62 (experimental group) among women in Edu LGA. This study also indicated the pre-intervention mean of 38.33 and post intervention mean of 41.09 among experimental group with t-value of 0.36, implied

that there was very poor willingness of women to access delivery care services in both experimental group and control group before and after HEIP. We however, concluded that health education intervention programme had positive effect on the knowledge of women about delivery care services but there was no significant impact on the women's willingness to access delivery care services in Edu local Government Areas.

Keywords: Access delivery care, Delivery care services, Effect, health education intervention, Edu Local Government Area, Knowledge and Women.

EFFET DE L'INTERVENTION EN EDUCATION SANITAIRE SUR LES CONNAISSANCES ET L'ACCESSIBILITE DES SERVICES DE SOINS D'ACCOUCHEMENT PAR DES FEMMES A EDU, DANS L'ETAT DE KWARA, AU NIGERIA.

RESUME

Même avec le meilleur dépistage prénatal possible, tout accouchement peut devenir compliqué et par conséquence nécessite une intervention d'urgence. Cette étude visait à examiner l'efficacité de l'éducation de la santé sur les connaissances et l'accès aux services de soins d'accouchement chez les femmes dans la municipalité d'Edu, dans l'État de Kwara, au Nigéria. Une recherche quasi expérimentale sur la conception des groupes de contrôle pré-test et post-test a été adoptée. L'approbation éthique a été sollicitée auprès des dirigeants / autorités des zones d'étude. Un

questionnaire conçu par les chercheurs a été utilisé pour la collecte des données et un test de fiabilité à moitié divisé a été utilisé pour déterminer sa fiabilité. Cent vingt femmes enceintes ont été exposées à dix semaines d'intervention en éducation sanitaire après le pré-test, 60 groupes expérimentaux ont été exposés à des conférences sur les services de soins prénatals et 60 à des séances d'assainissement HEI suivies d'un post-test. Les statistiques descriptives ont été utilisées pour répondre aux questions de recherche, tandis que les statistiques inférentielles du test t ont été utilisées pour tester des hypothèses à des niveaux significatifs de 0,05.

Le résultat a montré une amélioration significative des connaissances sur les services de soins de livraison, allant des scores moyens avant intervention de 67,70 aux scores moyens après intervention de 95,62 (groupe expérimental) chez les femmes dans la municipalité d'Edu. Cette étude indiquait également que la moyenne avant intervention de 38,33 et la moyenne après intervention de 41,09 dans le groupe expérimental avec une valeur t de 0,36 impliquaient une très faible volonté des femmes d'accéder aux services de soins après HEIP. Nous avons toutefois conclu que le programme d'intervention en éducation pour la santé avait un effet positif sur les connaissances des femmes concernant les services de soins d'accouchement, mais qu'il n'y avait pas d'impact significatif sur la volonté des femmes d'accéder aux services de soins dans les zones administratives locales d'Edu.

Mots clés: Accès aux soins d'accouchement, Prestation de soins, Effet, Intervention en éducation à la santé, Municipalité d'Edu, Connaissance et Femmes.

Introduction

In recent times, many programmes have been launched at national and international levels on women's health, with particular reference to

reduction in maternal morbidity and mortality in developing countries especially Nigeria. Maternal and child morbidity and mortality are still a public health problem in most developing countries especially in Nigeria, the maternal mortality ratio of 1:100 higher than the regional average, despite available human and material resources indicating the ugly trends in maternal health situation in Nigeria¹.

Delivery periods are periods that commenced as soon as the labour sets in until period the baby is born. This period is critical to both mother and the unborn child as any slight mishandling of the process of delivery will have a devastating effect on both the health of mother and the unborn child. The need for presence of a skilled birth attendant at this period is critical for both mother and the newborn².

In Nigeria, the use of health facilities during delivery by pregnant mothers is still very low and maternal morbidity and mortality remain a public health problem; the causes which may be attributed to several factors including demographic, socio-economic, culture, obstetric care and health care system factors³. Most maternal deaths do occur between the third trimester and first week after delivery.

This however, necessitates skilled attendant at the time of delivery and access to emergency obstetric care which remain the most effective measures to reduce morbidity and mortality⁴. Improved maternal health is achieved through skilled care at every birth and adequate management of pregnancy, childbirth and the post-partum period⁽⁵⁾.

A study has revealed that level of education influences the level of accessibility of health facilities for delivery as more than two third of the women using the services were found to have formal education⁽⁶⁾. Furthermore, the Nigeria Demographic and Health Survey reports shows

that only 10% of deliveries to mothers with no education occurred in health facilities compared to 90% of deliveries to mothers with education⁷.

Many women in Edu LGA delivered their babies at home attended to by unskilled attendants in unhygienic conditions. Delivery of babies in such filthy environments exposed both the mother and the new born baby to high risk of infections and many mothers lose their lives shortly after delivery of baby as a result of complications arising from delivery.

The prevalence of maternal death is on the increase in Edu LGA. In 2016 the Health Records of Edu LGA Information Unit showed that about 25 women lost their lives during and shortly after delivery. Based on the observed maternal and child mortality and morbidity in Edu LGA, this study examined the effectiveness of health education intervention programme on the knowledge and willingness of women to access delivery care services before and after HEIP in Edu Local Government Area of Kwara State, Nigeria.

Material and Methods

This study used a quasi-experimental research design of pre-test and post-test control group design to compare women exposed to health education intervention programme in experimental group with those not exposed to the same treatment (control group), to examine the effect of health education intervention on their knowledge and willingness to access delivery care services in Edu Local Government Area (LGA) of Kwara State.

The population for this study consisted of women drawn from total population of 97,602 who were females in Edu LGA, Kwara State⁸. The LGA comprises of three traditional districts with ten political wards and sixty five health facilities located in all communities of the LGA. Eleven out of sixty five health facilities provide maternal

health services among others which did not offer such services.

The sample for this study includes 120 women who were either pregnant or have one or more children selected from 160 households in the districts. A multiple stage sampling method was used in this study; first stage, simple random sampling method was used to select six political wards, that is, three from Lafiagi (experimental group) and other three wards were selected from Shonga district (control group).

The second stage involved selection of 160 households using systematic sampling procedure and the conduct of house numbering and selection of houses were made from the buildings list in each political ward at specified intervals of every third building depending on the length of the street.

In each of the household selected, 120 (60 for experimental group and 60 for control group) women of childbearing age, pregnant or with two or more children were purposively sampled from the two districts for the study. The instrument was a 25 item researchers-designed questionnaire on knowledge and accessibility to delivery care service. The questionnaire consisted of two sections: Section A sought information on knowledge of women about delivery care services designed in the form of "Yes" or "No" answer mode, while Section B was designed into three point responses of modified Likert type scale that is: A: Always (5 points), ST: Sometimes (3 points) and NA: Not Always, scored (1 point) that was used to obtain information from women in Edu LGA of Kwara State. The questionnaire was translated into Nupe language and used as Interview Schedule for women who could neither read nor write in English Language. The reliability of the instrument was determined by pre-testing using Split half test of Cronbach statistic of reliability and result of coefficient of reliability of 0.67 was obtained. Ethical approval

for the conduct of this study was obtained from the authorities of Edu LGA and community leaders of the study areas. A copy of the approval letter was read to women for informed consent at various households selected for the study.

The data collection procedure

The data collection was in three phases which includes pre-intervention phase (pre-test), intervention phase and post intervention phase (post-test).

The pre-intervention phase: this phase involved advocacy visits, selection of women for the study and recruitment and training of research assistants who were nurses and community health educators working in the primary health centres studied. Three types of educational materials were prepared to communicate health messages during the intervention sessions. This teaching material are, pamphlet and posters, docudrama (video documentation) and a delivery care services post sign charts.

The advocacy visit was paid to the community leaders in the three study areas to seek permission and cooperation for the conduct of the study on the first week. The husbands and household heads where the women residents were visited and the purpose of the study was explained to them.

On the second week, a meeting and training workshop was held with the research assistants following development of the instructional materials. Another meeting was held on the second day of the week with women who volunteered to participate in the study and a pre-tested instrument using semi structured questionnaire was administered on 120 women (60 experimental group and 60 control group).

The interview schedule was used by the researchers and research assistants to obtain

information from women as pre-test on the pre-intervention day. The first day of intervention, women were briefed separately on the purpose of the study and were allowed to discuss freely and ask questions for clarifications by the researchers.

They were then grouped into experimental group (60 women from Lafiagi districts) exposed to health education intervention on delivery care services and the control group (60 women from Shonga district) exposed to health education intervention on environmental sanitation.

The grouping was done on district basis which are about 168 kilometers apart to control exchange of information among women in the two groups. The degree of separation of women in the experimental and control groups might not be perfect due to their common boundaries which made randomization of subjects in the groups impossible.

However, the decision on which district served as experimental or control group was determined by the Delivery care services accessibility outcome as revealed by the health information unit of the LGA.

The health education intervention programme (HEIP) started with a video show and health teaching on Delivery Care Services (DCS) on the experimental group and health teaching on environmental sanitation on control group every Thursdays and Sundays at the village primary school and Town halls designated for the intervention throughout the ten weeks of intervention. The researchers met with the experimental and control groups twice in every week for 45 minutes health education session per month at community level for a period of ten weeks using lecture and discussion methods of health education.

At the end of the ten weeks of health education intervention programmes, a week revision of all

the topics taught was done on both experimental and control groups respectively:

and control groups at community levels in the two districts.

The post-intervention session: this session was conducted on the twelfth week of intervention phase, the researchers and research assistants re-administered the same sets of questionnaire/interview schedule used during pre-test phase to women in both experimental

The data analysis was done using descriptive statistics of mean and standard deviation to answer research questions and inferential statistic of t-test to test the null hypotheses at 0.05 level of significance.

Results

Research question 1: The knowledge level of women about Delivery Care Services before and after health education intervention programme in Edu Local Government Area of Kwara State?

Table 1: Summary of mean and standard deviation scores on knowledge of women about delivery care services.

Group	N	Pre-intervention		Post-intervention	
		X ± S.D	S.E	X ± S.D	S.E
Experimental group	60	67.70 ± 31.07	4.01	95.62 ± 6.01	0.77
Control group	60	61.46 ± 34.08	4.4	56.87 ± 34.01	4.39

Table 1 shows the pre-intervention showed mean scores of 67.70 for the experimental group and 61.46 for the control group, while after intervention mean

scores was 95.62 for the experimental group and 56.87 for the control group respectively.

Research question 2: Will Health Education Intervention Programme has impact on women Accessibility to Delivery Care Services in Edu Local Government Area of Kwara State?

Table 2: Summary of mean and standard deviation scores on the accessibility of delivery care services among women.

Group	N	Pre-intervention		Post-intervention	
		X ± S.D	S.E	X ± S.D	S.E
Experimental group	60	38.33 ± 21.18	4.27	41.09 ± 27.23	3.25
Control group	60	30.51 ± 19.73	3.33	26.81 ± 20.91	3.73

Table 2 shows the pre intervention mean scores of 38.33 for the experimental group and 30.51 for the control group, while post intervention mean scores were 41.09 for the experimental group and 26.81 for

the control group respectively. This result indicates a very poor willingness of women to access delivery care services in both experimental group and control group before and after HEIP.

*Effect of Health Education Intervention on Knowledge and Accessibility of
Delivery Care Services by Women in Edu, Kwara State, Nigeria.*

Hypothesis 1: Health Education Intervention Programme (HEIP) has no significant effect on the knowledge of women about delivery care services in Edu LGA.

Table 3: Summary of t-test on delivery care services among experimental group.

Experimental Group	X	S. D	S.E	df	T	P value
Pre intervention	67.7	31.07	4.01	59	6.83	0.000
Post intervention	95.62	6.01	0.77			

$t=6.83$, $df:59$, $p<0.05$

Table 3 shows pre-intervention on experimental group with mean of 67.70 and Post-intervention mean of 95.62 with t-value of 6.83 which is greater than table value of 1.96. The null hypothesis is hereby rejected at 0.05 level of significance.

Hypothesis 2: Health Education Intervention Programme will not have significant effect on the willingness of women to access deliver care services in the health centers in Edu LGA. Kwara State.

Table 4: Summary of t-test on the accessibility of delivery care services by women in Edu LGA.

Experimental Group n=60	X	S.D	S.E	Df	t	p-value
Pre-Intervention	38.33	21.18	4.27	59	0.36	0.62
Post-Intervention	41.09	27.23	3.25			

$t=0.36$, $df: 59$, $p<0.05$

Table 4 shows pre-intervention mean of 38.33 and post intervention mean of 41.09 on experimental group with t-value of 0.36. Since t-calculated (0.36) < t-tabulated (1.96), the null hypothesis is hereby accepted at 0.05 level of significance.

Discussion

The findings of this study on the base line knowledge of women about delivery care services before HEIP in both experimental group and control group showed a high level mean score particularly on the women knowledge about signs of labour and the importance attached to delivery of babies at health centers respectively.

There was also a significant increase in knowledge about delivery care services available in ANC centers, especially in the areas of blood screening and urine testing sessions which offered the health workers opportunities to monitor the progress of labour and health status of both the mother and the unborn baby.

This level of knowledge among women about delivery care services before HEIP may probably be influenced by several factors such as women previous experiences in attending ANC for services and childbirth in health facilities which subsequently determine their continual patronage of that facility for delivery services.

study agreed with a study which reports that women tend to deliver with the same provider if a previous delivery went well and tend to change if they are dissatisfied. The deliveries of women also depend to a large extent on the attitude of health worker, economic status and social support from the husbands and family members⁽⁹⁾.

The education intervention programme in this study showed positive impact on the knowledge of women in experimental group about delivery care services, as demonstrated by increased mean score in women ability to identify signs of labour and high level of knowledge about the importance of delivery at a centre after HEIP.

Consequently, women knowledge has also increased with corresponding increased mean score in awareness about delivery care services and obstetrics care service such as caesarian section showing an improvement shift from pre-intervention to post intervention.

Findings implied that women high level of knowledge about delivery care services as well as the complications that may arise during or after delivery of baby has awakened their willingness to take necessary action on time to avert such impending dangers to pregnancy. However, in the control group women knowledge about delivery care services showed no significant difference before and after HEIP.

Findings supported theory of reason action posited that intention of a person to perform a specific behaviour is a function of her attitude and influence of social environment which may be positive or negative towards a given behaviour^{10,11}.

This finding further indicated that exposure of women to ten weeks of HEIP has influenced and modified women willingness towards delivery care services provided in the community health centers.

This finding corroborates the study which opined that influence of knowledge on health behaviour as tested by Mann-Whitney non-parametric statistic test which uses the mean of ranks to determine whether the maternal health care user-group and the non-user group have different characteristics in terms of women's knowledge about pregnancy complication and found that the mean of rank calculated was significantly different between two groups separated (maternal health care user-group and non-user group)¹².

This study further supported a similar study on impact of HEIP about breast cancer among women in Egypt which observed that Women's knowledge about breast self-examination (BSE) showed highly significant improvement in the frequency and appropriate time from pre to post-test¹³.

On the contrary, this study showed no significant effect of health education intervention on the willingness of women to access delivery care services when compared with their knowledge. The women lukewarm attitudes towards accessibility to delivery care services may be due to some factors such as high cost of delivery care, poor attitudes of health workers and lack of social support from the families.

These findings agreed with studies on women access to medical services, which observed that despite the fact that medical services were accessible and free of charge, women in

Tajikistan prefer to deliver babies at home because they perceive available medical services to be of low quality and unsafe ^{7,19}.

The finding of this study further supported study which claimed that respondents' lack of accessibility of health facility for delivery was linked with their unfriendliness encounter in the previous delivery ⁶.

However, this study slightly differs from a study on the knowledge and willingness to utilize delivery care services among women in Ilorin-east Local Government Area, where more than two thirds of the respondents (87.7%) were aware of delivery care services and were willing to use them following pre and post interventions ¹⁵.

Although, fifteen out of sixty women constituting 25% of study population (experimental group) in their third trimester delivered babies at the health center during the intervention period, this showed that intervention will have positive impact on women accessibility to delivery care services on their subsequent deliveries.

This finding was in line with position of theory of reason action that attitudes are function of beliefs, if a person believes that performing a given behaviour will lead to positive outcomes, she will hold a favourable attitude toward performing that behavior ⁽¹⁰⁾.

On the accessibility women to delivery care services after intervention the finding showed a significant effect of HEIP on experimental group compared with low mean score in the control group.

This result implied that there was no significant difference on the mean scores of women access

to DCS before and after intervention, which indicated that despite the intervention about delivery care services, HEIP had no significant impact on the willingness of women to access delivery care services in Edu LGA of Kwara State.

These findings justified study conducted in Mexico, where a health education intervention showed 33% of the study population knew about EC, as against only 20% in 1997 before the introduction of the health education programme.

This implies that further improvement in knowledge of EC could be achieved with repeated reinforcement of the health education ¹⁶. It is important to note, based on the above findings that women in Edu LGA if exposed to adequate and consistent health education during ANC visits, their misconception about the use of DCS will be corrected and this will further improve the accessibility of women to various delivery care services in communities.

Conclusion

Based on the health education intervention programme in this study using delivery care services teaching protocol, the intervention had positive effect on the knowledge of women about DCS in Edu Local Government Areas but HEIP had no significant effect on the willingness of women to access delivery care services in Edu LGA.

It is however, recommended that Governments at all levels of health delivery especially in Edu LGA, Kwara State Ministry of Health and Non-governmental Organizations should strengthen and intensify health education intervention programmes about delivery care services at primary health care centres in the communities. This is to improve and sustain knowledge of women gained during HEIP about delivery care in the communities of Edu LGA, Kwara State.

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To do what nobody else will do,
a way that nobody else can do,
in spite of all we go through;
is to be a nurse

Rawsi Williams