



Full Length Research Paper

Knowledge of women of childbearing age on cerebral palsy and its predisposing factors among children in an urban local government area, Oyo State, Nigeria

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Abstract

Cerebral Palsy (CP) a paediatric neurological disorder constitute a major reason for specialist care among children but the knowledge of the condition has not been adequately explored among the mothers. This study used a quantitative approach to assess knowledge of cerebral palsy and its predisposing factors among women of childbearing age in Ibadan North Local Government Area of Oyo State, Nigeria. Knowledge was assessed using a 12 point scale with scores of ≤ 3 , $>3 - \leq 8$ and $>8 - \leq 12$ categorised as poor, fair and good respectively. Data were analysed using descriptive statistics and chi square test at $p < 0.05$. Mean age was 31.0 ± 7.7 years and 38.5% had primary education. A larger percentage (95.2%) had heard about cerebral palsy and 66.5% were not aware of the risk factors predisposing children to the development of cerebral palsy. Mean knowledge score on CP was 9.1 ± 2.1 . A significant association was observed between general knowledge of CP and knowledge of its prevention. Knowledge of prevention of cerebral palsy among women of childbearing age studied appeared good but inadequate. There is need for comprehensive health promotion and education activities among this group of women to improve knowledge of predisposing factors and its prevention.

Keywords: Cerebral palsy, knowledge, women of child-bearing age, predisposing factors, prevention

INTRODUCTION

Cerebral palsy (CP) is a complicated disease with varying causes and outcomes. It has created significant burden to both affected families and societies, not to mention the quality of life of the patients themselves (Hueng-Chuen et al 2015). It constitute a major reason for paediatric specialist care in Ibadan, Nigeria. The aetiology of which is influenced by preventable causes especially among other neurological disorders seen in this part of the world (Lagunju and Okafor, 2009). Cerebral palsy is a life-long physical disability caused by damage of the developing brain and it occurs in about 2.1 per 1000 live births and this is usually permanent (Oskoui, Coutinho, Dykeman, Jette and Pringsheim, 2013). The consequences of Cerebral Palsy include retardation of growth and development as well as social and financial squeals. The frequency of cerebral palsy has not declined, and there

are relatively few specific, modifiable risk factors for cerebral palsy. Attention to factors that are associated with an increased risk of cerebral palsy might help to prevent its development. The focus of preventing cerebral palsy is in alleviating or minimizing the risk. Expectant parents, medical practitioners, researchers and government policy makers play important roles in the quest to reduce the chances of a child developing cerebral palsy (Ogunlesi, Ogundeyi, Ogunfowora, Olowu, 2008). However, greater attention needs to be given to women, considering their role as primary care givers in child care. This study was therefore conceptualised to fill this gap by assessing the knowledge of women of childbearing age on the prevention of cerebral palsy in a local government in Ibadan metropolis to provide evidence for appropriate interventions among this group.

MATERIAL AND METHODS

Study design

The study was descriptive cross-sectional one in which the quantitative method was used to assess the knowledge of cerebral palsy and its predisposing factors among women of child bearing age in Ibadan North Local Government Area.

Study setting

This study was carried out in Ibadan North Local Government Area (LGA) of Oyo State, Nigeria, one of the five local government areas in Ibadan metropolis. The local government has 12 public health facilities located in various parts of the local government consisting of one federal teaching hospital, the University College Hospital; one state maternity hospital; a dispensary; and several primary health care centres which also serve as maternity and child welfare centres. The main economic activity of the people in the Local Government is trading, accounting for two-thirds of the employment; public service (including teaching) and industry accounts for most of the rest of employment. There are twelve wards in the Local Government (NPC, 2006).

Study Population

The population for this study comprised women of childbearing age (15 to 49 years) who have given birth to children in selected areas in Ibadan North Local Government.

Inclusion criteria

Women of childbearing age who have given birth to children in selected area in Ibadan North Local Government and are within the age range of 15 to 49 years were eligible and included in the study.

Exclusion criteria

Women of childbearing age who have not given birth to children and are within the age range of 15 to 49 were excluded from participating in the research. Women who did not give consent to participate were also excluded from the study.

Sample size determination

The sample was calculated using the 16.2% prevalence documented by the findings of Ogunlesi et al, (2008) at significant level of 5% (95% confidence interval). A total sample of 208 was obtained.

Sampling Technique

A four stage sampling technique was used to select respondents interviewed for the study. Ibadan North LGA was purposively selected out of thirty-three local governments in Oyo State. Six wards were randomly selected from the twelve wards in the Local Government. Fifty percent of the communities in each of the wards were selected by stratified sampling. Selection of respondents was done house to house in the communities. From each house, a household was selected and every consenting woman that was within the age range of women of childbearing age was recruited for the study.

Data Collection methods

A pretested interviewer-administered questionnaire was used to interview mothers who were willing to participate from each household in the selected houses from each ward to participate in the study. Data was collected on socio-demographic characteristics, knowledge of cerebral palsy, knowledge of types of cerebral palsy, knowledge of prevention of cerebral palsy, knowledge of risk factors of cerebral palsy. The questionnaire was administered in Yoruba the indigenous language of the respondents.

Data Analysis and Management

Knowledge of prevention of cerebral palsy among mothers, and neonatal care given to children by mothers were analysed based on the responses from the respondents. The responses that were yes were rated one (1) and no, were rated zero (0). This was resulted in a 12-point CP knowledge of prevention score, with 0 being the lowest and 12 the highest points. Respondents with 0-3 points were regarded as having poor knowledge, 4-7 fair while 8-12 points was regarded as good knowledge of prevention. Data was entered using SPSS version 20 and analysed using descriptive statistics and chi square test at $p < 0.05$.

Ethical Consideration

Ethical approval to carry out the study was obtained from the Oyo State Ethical Review Committee. Permission was also obtained from the administration of Ibadan North LGA for the study to be conducted in the selected wards and households. The nature, purpose and process of the study were explained to the respondents after which informed consents were obtained. Respondents were assured of confidentiality, privacy and anonymity of information provided. Necessary steps such as asking for no names and keeping completed copies of the

Table 1: Respondents' Socio-Demographic Characteristics N=208

Socio-demographic Characteristics	Frequency	(%)
Age (in years)		
15 – 24	39	18.7
25 – 34	95	45.7
35 – 44	58	27.9
45 and above	16	7.7
Occupation		
Civil Servant	10	4.8
Trader	113	54.3
Artisan	55	26.4
Apprentice	2	1.0
Student	3	1.4
Social worker	2	1.0
No job	23	11.1
Level of education attained		
No formal Education	29	13.9
Primary Education	80	38.5
Secondary Education	76	36.6
N.C.E	2	1.0
O.N.D	5	2.4
H.N.D	5	2.4
First Degree	9	4.3
Second Degree	2	1.0

Table 2: Knowledge of cerebral palsy among respondents N=198

Knowledge statement	Yes	No	Not sure
Cerebral palsy is not a communicable disease	110 (55.6)*	51 (25.8)	37 (18.6)
Cerebrum is the largest portion of the brain affected by cerebral palsy	165 (83.3)*	32 (16.2)	1 (0.5)
The abnormalities in the cerebral cortex disrupt the brain's ability to control both movement and posture	154 (77.8)*	36 (18.2)	8 (4.0)
The damage done to the brain in cerebral palsy cannot cause further degeneration of the brain	139 (70.2)*	49 (24.7)	10 (5.1)
There are risk factors that predisposes children to the development of cerebral palsy	69 (34.8)*	122 (61.6)	7 (3.5)

* Correct responses

questionnaire in a secure place were taken to ensure confidentiality. Respondents were continuously reminded of their right to withdraw from the study at any time. After each interview, the respondents were consulted to ensure that study findings reflected their perceptions.

RESULTS

Demographic characteristics

Demographic characteristics of respondents are presented in Table 1. Mean age of respondents was

31.0±7.7years, 93.8% were married and 38.5% had primary education. Also, 73.1% belong to the Yoruba ethnic group, 20.7% Hausas and 6.3% were Igbos. Religious affiliation showed that 57.2% were Muslims and 42.8% Christians.

Knowledge of cerebral palsy

Most of the respondents (95.2%) had heard of cerebral palsy. Knowledge of cerebral palsy among the 198 who had heard is shown in table 2. Regarding knowledge of cerebral palsy, 52.9% respondents correctly stated that

Table3: Knowledge of types of cerebral palsy among respondents **N=198**

Knowledge of types of CP	Yes	No	Not Sure
Congenital cerebral palsy is a disorder that was present at birth	186 (93.9)*	6 (3.0)	6 (3.0)
Acquired cerebral palsy are acquired after birth as a result of infection, head trauma or some other cause of brain damage	191(96.5)*	5 (2.5)	2(1.0)
Hemiplegia cerebral palsy affects one side of the body	171(86.3)*	17(8.6)	10(5.1)
Diplegia cerebral palsy has to do with one side of the body	181 (91.4)	7 (3.5)*	10 (5.1)
Monoplegia cerebral palsy affects only one limb	179(90.4)*	9 (4.5)	10 (5.1)
Quadriplegia is the type of cerebral palsy that affects the four limbs	162 (81.8)*	26 (13.1)	10 (5.1)

* Correct responses

Table 4: Knowledge of risk factors for cerebral palsy among respondents **N=198**

Knowledge of risk factors for CP	Yes	No	Not Sure
Multiple births can predispose children to the development of cerebral palsy	49 (24.7)	134 (67.7)	15(7.6)
Ever having assisted reproductive technology	142 (71.7)	56 (28.3)	0(0.0)
Having infection during pregnancy without being treated could lead to development of cerebral palsy	72 (36.3)	90 (45.5)	36 (18.2)
Diagnosis of any infection during pregnancy	9(4.5)	188 (94.9)	1(0.5)
Incomplete vaccination against childhood illnesses	186(93.9)	11(5.6)	1(0.5)
Complications during delivery can result to cerebral palsy in children	75 (37.9)	101 (51.0)	22(11.1)

cerebral palsy is not a communicable disease, 79.3% were of the opinion that cerebrum is the largest portion of the brain affected by cerebral palsy and 74.0% knew that the abnormalities in the cerebral cortex can disrupt the brain's ability to control both movement and posture. Mean knowledge score was 9.1 ± 2.1 .

Knowledge of types of cerebral palsy

As presented in Table 3, 94.2% correctly knew that congenital cerebral palsy is a disorder that was present at birth, 96.6% knew that acquired cerebral palsy was acquired after birth as a result of infection, head trauma, or some other cause of brain damage. Respondents could differentiate the types of cerebral palsy as hemiplegia (86.5%), diplegia (91.8%), monoplegia (90.4%) and quadriplegia (81.7%). Majority of the respondents (97.6%) reported that inability to roll over, sit, stand or walk might be early signs of cerebral palsy in children.

Knowledge of prevention of cerebral palsy

A higher proportion of respondents (69.7%) opined that cerebral palsy can be prevented while 63.5% correctly knew that cerebral palsy has no cure but can be

managed. General knowledge of cerebral palsy was found to significantly affect knowledge of prevention.

Knowledge of risk factors to cerebral palsy

Table 4 outlined risk factors for cerebral palsy as listed by the respondents. This included non-diagnosis of infection during pregnancy (95.2%), incomplete vaccination of children (93.8%), assisted reproductive technology (72%), complications during delivery (51.8%), untreated infection during pregnancy (45%) and multiple births (24.5%).

DISCUSSION

Mean knowledge of cerebral palsy by women of reproductive age in this study was good. This was in line with the findings of Olawale et al (2013) where 70% of the women who participated in their study claimed to have adequate knowledge about cerebral palsy. The correct knowledge exhibited by the respondents in this study was in line with the report of the of CDC (2014) which ascertained that out of 1,200 people randomly sampled from the total Finnish population, cerebral palsy was known to 95.4%. The types of cerebral palsy correctly identified by the respondents affirmed those

reported by Rethlefsen, Ryan and Kay (2010) and, Hueng-Chuen et al 2015. These levels of knowledge may be related to a number of health education messages received by women during antenatal visits to health facilities.

Risk factors for cerebral palsy correctly identified from this study included assisted reproductive technology, diagnosis of infection during pregnancy, incomplete vaccination of children and complications during delivery. This knowledge was however inadequate. The knowledge that cerebral palsy can be prevented and effectively managed was in line with the findings of Ogunlesi, et al (2008) which opined that attention should be given to limiting exposure to risk factors for its development. More attention therefore need be paid to prevention of cerebral palsy by alleviation and minimisation of risk.

CONCLUSION

The findings of this study revealed that most women of childbearing age in the study area were aware of cerebral palsy and some precautions to be taken during pregnancy and child care to prevent their children from developing this disease. However, their knowledge of risk factors predisposing children to the development of cerebral palsy was inadequate when compared to the parameters on the Cerebral Palsy Risk Factor Checklist. There is therefore need for comprehensive health education among women of reproductive age to increase their knowledge on factors that could predispose a child to cerebral palsy.

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