Original Article

Awareness and perception of preconception care among health workers in Ahmadu Bello University Teaching University, Zaria

Adeoye Tokunbo O, Kolawole Abimbola O, Onwuhuafua Polite I, Adeoye Gbemiga O[1]

Departments of Obstetrics and Gynaecology and [1]Paediatrics, Ahmadu Bello University Teaching Hospital, Zaria, Nigeria

ABSTRACT

Background: Preconception care (PCC) has been found to improve fetomaternal outcome but it is not widely practiced in Nigeria.

Objective: To obtain information concerning the level of awareness, perception and practice of PCC among health workers with the view of providing recommendation for a framework for its implementation in Ahmadu Bello University Teaching Hospital.

Materials and Methods: A descriptive cross-sectional study was conducted among 280 health workers (doctors and nurses) using pretested self-administered, semi-structured questionnaires between November 2013 and January 2014. Analysis was done using the Statistical Package for the Social Sciences version 16.0. Chi-square test was used to determine relationships between variables.

Results: The response rate was 85.0% with 130 (54.2%) doctors and 109 (45.8%) nurses. Most (83.3%) of the respondents had heard of PCC, and 91.6% defined it correctly. Only 55 (23%) knew more than 75% of the components of PCC. The difference in knowledge of PCC between doctors and nurses and based on years of experience was statistically significant ($\chi^2 = 0.014$). Only 114 (47.7%) had ever offered some form of PCC. The most common intervention was preconception folic acid administration in 33% of the respondents. The perceived obstacles to assessing PCC were poor information (88.3%), poor health seeking behaviour (68.6%) and unplanned pregnancies (60.7%). Majority 182 (76.2%) felt obstetricians should handle PCC followed by family physicians. Opportunistic delivery was cited as the best mode of delivery.

Conclusion: The level of awareness of PCC is high among health workers, especially doctors. It can be offered opportunistically until full integration into the health care system. Training of health workers will improve its implementation.

Key words: Awareness; care; health worker; perception; preconception.

Introduction

Preconception care (PCC) is still novel and not widely practiced in the health care system in Nigeria. It is imperative that this form of patient care be tailored according to the available human financial and institutional resources of individual settings within the context of sociocultural beliefs in order to ensure optimal utilization of PCC services.

PCC, which is a component of comprehensive obstetric care, can be described as a specialized form of care for women of reproductive age before the onset of pregnancy to detect, treat, or counsel them about the pre-existing medical and social conditions that may militate against safe motherhood and delivery of a healthy offspring.[1]

PCC has been implemented in some high income countries such as Italy, Netherlands, United States United Kingdom,

Address for correspondence: Dr. Kolawole Abimbola O, Department of Obstetrics and Gynaecology, Ahmadu Bello University Teaching Hospital, Zaria, Nigeria.
E-mail: kolabimbo@yahoo.com

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Canada, Spain and Australia, as well as some middle income countries such as Bangladesh, Philippines and Sri Lanka.[2,3] A study in London among health workers and women showed that 86% of the doctors and 95% of the nurses believed that PCC was beneficial in reducing maternal and neonatal morbidity and mortality. Opportunistic delivery of this service was widely considered to be the most effective mode of delivery.[4]

This form of care is still evolving in Nigeria and is virtually nonexistent in North-west Nigeria where maternal and perinatal morbidity and mortality is very high due to unplanned and frequent pregnancies, high parity, suboptimal health care seeking behaviour and low level of maternal health care.[5,6]

Challenges that may arise are that most pregnancies are unplanned,[7-10] lack of information,[11-14] poor attitude of the female population for whom the programme was designed[4,8,14,15] and inherent aversion to unfamiliar terrain of PCC by reproductive health care providers.[8,10,12] Therefore, it is essential to ascertain the awareness of PCC and how it is perceived among health workers who will be involved in delivery of this form of care to ensure optimal provision of PCC services.

Objective

The objective of the research was to obtain information concerning the level of awareness, perception and practice of PCC among health workers, with the view of providing recommendation for a framework for its implementation in Ahmadu Bello University Teaching Hospital (ABUTH).

Materials and Methods

The present study was a descriptive, cross-sectional study conducted among 280 health workers (doctors and nurses) in ABUTH, Zaria located in Kaduna State, North-western Nigeria. ABUTH is the only tertiary health centre located in Zaria, and it receives referrals from Zaria and its neighbouring regions.

The sample size was derived from the formula[16] $n = z^2pq/d^2$

where n represents the desired sample size, z is standard normal deviate at 95% confidence interval at 1.96 corresponding to 95% confidence interval, $P = 0.86$ is the prevalence of the target population quoted from previous literature,[4] $q = (1 - P) = 0.14$ and d is precision limit of 0.05.

The sample size was calculated to be 185, and using an attrition rate of 10%, 19 respondents were included making a calculated minimum sample size of 204. A total of 280 questionnaires were, therefore, administered. Pretested, self-administered, semi-structured questionnaires were used to collect data between November, 2013 and January, 2014. Analysis was done using the SPSS Inc. Released 2007, SPSS for Windows, Version 16.0. Chicago, SPSS Inc. Chi-square test was used to determine relationships between variables.

Results

Two hundred and thirty-nine questionnaires were returned and analysed giving a response rate of 85.0%. One hundred and thirty (54.2%) respondents were doctors and 109 (45.8%) were nurses. The age range of respondents was 20–59 years. Most respondents 107 (44.8%) were within the age range of 30–39 years, with the mean being 36.64, mode 30 years and median 36 years. The standard deviation was 7.885 and variance 62.178.

There were 90 male respondents (37.7%) and 149 female respondents (62.3%); 150 (64.1%) were Christians and 85 (35.9%) were Muslims. Thirty-six (15.1%) respondents were Hausa, 32 (13.4%) Igbo and 71 (29.7%) Yoruba. Other tribes constituted 96 (40.2%) of the respondents. Majority of respondents were married 176 (73.6%) or single 49 (20.5%); 8 (3.3%) were separated and 4 (1.7%) were widowed [Table 1].

A total of 199 respondents (83.3%) had heard of PCC. Majority of the respondents (91.6%) defined PCC correctly. Only 55 (23%) of respondents knew more than 75% of the components of PCC, 71 (29.7%) knew 51–75%, 65 (26–50%) and 48 (20.1%) knew less than 25% of the components, as shown in Figure 1.

Table 2 shows the cross-tabulation of knowledge of components of PCC with occupation. The difference in knowledge of the components of preconception care among the doctors and nurses was statistically significant. ($\chi^2 = 0.000$). The difference in knowledge based on years of experience was significant ($\chi^2 = 0.014$), as shown in Table 3. The respondents who had fewer years of work experience had a better knowledge of PCC, as reflected in the higher percentage of knowledge of components of PCC.

Better pregnancy outcome (83.7%), better state of health (66.5%), health education (50.2%), counselling (42.7%) and decreased maternal and neonatal mortality (83.3%) were identified to be benefits. The major barrier perceived by respondents for patients to assess PCC was poor information in 88.3%, poor health seeking behaviour in 68.6% and unplanned pregnancies in 60.7%.

One hundred and fourteen (47.7%) respondents had offered some form of PCC. The most common intervention was preconception folic acid administration in 33% of the respondents followed by counselling in 23% and screening for diseases in 12%.

Majority of respondents, 115 (48.1%), felt any available contact with the patient to be best way to offer PCC. Majority of the respondents, 182 (76.2%), felt that obstetricians should handle PCC followed by family physicians 128 (53.6%), nurses 108 (45.2%), physicians 64 (26.8%) and midwives 50 (20.9%).

Figure 2 shows that 199 (83.3%) of the respondents had never been trained on PCC. Two hundred and twenty-nine respondents (95.8%) felt training will improve their practice. Majority, 218 (91.2%), of the respondents were willing to offer PCC whereas 217 (90.8%) were willing to utilize the service if available.

Table 1: Sociodemographic characteristics

Characteristics	Frequency	Percentage
Age group		
20-29	41	17.2
30-39	107	44.8
40-49	59	24.7
50-59	18	7.5
No response	14	5.9
Sex		
Male	90	37.7
Female	149	62.3
Religion		
Christian	150	62.8
Muslim	85	35.6
No response	4	1.7
Tribe		
Hausa	36	15.1
Igbo	32	13.4
Yoruba	71	29.7
Others	96	40.2
No response	4	1.7
Marital status		
Single	49	20.5
Married	176	73.6
Separated	8	3.3
Widow/widower	4	1.7
No response	2	0.8
Occupation		
Doctor	130	54.4
Nurse	109	45.6

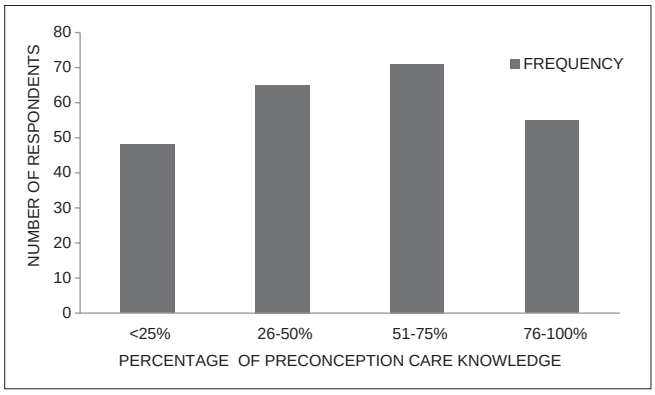

Figure 1: Knowledge of components of preconception care

Discussion

The level of awareness of PCC was high in this study as 83.3% of health workers had heard of PCC. Most respondents, 71 (29.7%), knew 51–75% of the various components of PCC; this is slightly lower than 77% in a study in UK.[4] This is, however, not surprising as most respondents (83.3%) had not been trained on PCC. The difference in knowledge based on years of work experience was highly significant as younger health personnel appeared to have more knowledge of PCC. This knowledge gap may be due to the fact that it is a new initiative that is yet to be fully incorporated into the health system. Older health personnel are not likely to have been exposed to PCC during their in-service training.

The difference in knowledge of the components of PCC among the doctors and nurses was also significant as a greater proportion of doctors (72%) had more than 50% knowledge compared to only 29% of nurses. This difference signifies the urgent need to increase training programs in PCC to health care providers.

Better pregnancy outcome (83.7%) and decreased maternal and neonatal mortality (83.3%) were the perceived benefits of PCC. This is similar to a previous study where 86% of the doctors and 95% of the nurses believed that PCC was beneficial in reducing maternal and neonatal morbidity and mortality.[4]

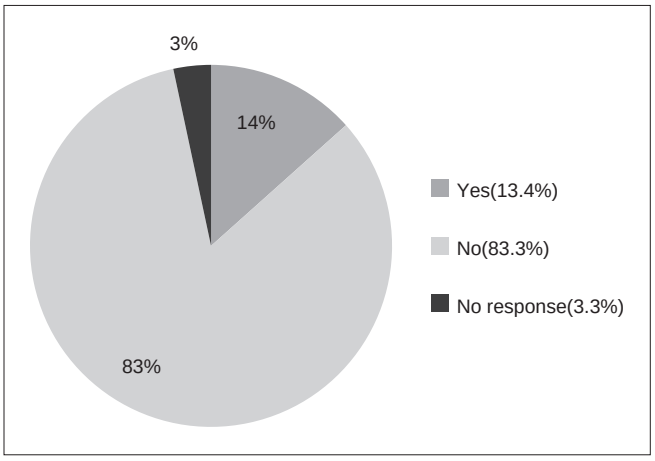

Figure 2: Training on preconception care

Table 2: Cross-tabulation of knowledge of components of preconception care with occupation

Knowledge of components of preconception care	Occupation		Total
	Doctor	Nurse	
<25%	6 (2.5%)	42 (17.6%)	48 (20.1%)
26-50%	30 (12.6%)	35 (14.6%)	65 (27.2%)
51-75%	48 (20.1%)	23 (9.6%)	71 (29.7%)
76-100%	46 (19.2%)	9 (3.8%)	55 (23%)
Total	130 (54.4%)	109 (45.6%)	239 (100%)

Chi-square, χ^2=59.694; P=0.000, on knowledge of components of preconception care

Table 3: Cross-tabulation of knowledge of components of preconception care with years of work experience

Knowledge of components of preconception care	Years of work experience				
	1-10	11-20	21-30	>30	Total
<25%	22	10	13	2	47
26-50%	40	14	5	4	63
51-75%	46	19	4	1	70
76-100%	42	8	3	2	55
Total	150	51	25	9	235

Chi-square, χ^2=24. 134 0.014 on knowledge of components of preconception care

Opportunistic delivery such as any contact with patient was considered to be the best mode of service delivery similar to a previous study.[4] Less than half (47.7%) of the respondents had offered some form of PCC to patients opportunistically as there is no clinic for that purpose. This is slightly higher than what was observed in a survey where 1 in 6 (16.6%) health care providers (Obstetricians/General practitioners) offered PCC.[17] Majority of health workers, 182 (76.2%), were in favour of the obstetricians providing PCC followed by family physicians 128 (53.6%). This is quite pragmatic as a study done by Ezegwui showed that most women in the study presented to an obstetrician for PCC.[13] This is in contrast to another study where the patients preference for preconceptional health was the general practitioner (51.3%) followed by the obstetrician (44%).[18] In another study in Netherlands among general practitioners, 52% felt that the preconception consultation should be provided by the general practitioner.[19]

Conclusion

Preconception health care is yet to be fully explored in Nigeria. This service may be offered at every opportunity when women access health care until it becomes fully incorporated into a comprehensive obstetric package within the health care system. At present, training of health workers on PCC is very low, and hence, introducing it into in-service training as well continuous professional education and re-training will ultimately improve the knowledge and awareness of this service.

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Conflicts of interest

There are no conflicts of interest.

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