# Postnatal care uptake and associated factors among nursing mothers in Benin City, Edo State, Nigeria

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## Abstract

Globally, postnatal care is a strategic public health intervention to aid significant reduction in maternal and neonatal morbidity and mortality especially in developing countries. This study aimed to assess the level of postnatal care (PNC) uptake and associated factors among nursing mothers for improved maternal and newborn outcomes in Benin City, Edo State. Two hundred and twenty (220) nursing mothers attending immunization clinics in University of Benin Teaching hospital, Benin City were studied using a descriptive cross-sectional study design. Data analysis was carried out using IBM SPSS version 21.0 statistical software after sorting and collating researcher administered questionnaire. Results were represented as prose, frequency tables and figures, univariate and bivariate analysis to assess postnatal care uptake and associated factors was carried out with level of significance set at P<0.050. Two hundred and five (93.2%) of the respondents studied registered and attended antenatal care (ANC) during pregnancy**.** One hundred and twenty-one (55.5%) of respondents studied had good knowledge of PNC, 190 (86.4%) had a positive attitude towards PNC, while 159 (72.3%) attended PNC. ANC registration (P<0.001), knowledge of PNC (P=0.002) and attitude towards PNC (P=0.013) were identified as significant factors influencing PNC among nursing mothers. Postnatal care uptake was high among study participants. ANC registration was a major determinant of postnatal care uptake in the study area, in addition to also significantly influencing knowledge of PNC and attitude towards PNC among nursing mothers studied. There is need to sustain and improve on the gains of postnatal care (PNC) uptake among nursing mothers in Benin City, by promoting sensitizations campaigns to promote ANC registration and attendance among pregnant women.

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## Introduction

Maternal health has emerged as the most important indicator of global and national wellbeing.[1,2] Antenatal care, institutional/skilled attendance at delivery and postnatal care are three very important interventions required in continuum to promote optimum maternal and child health to help reduce maternal and neonatal morbidity and mortality.[1,2] An estimated 74 per cent of maternal deaths globally could be averted if all women had access to the interventions for preventing or treating pregnancy and birth related complications.[1] Postnatal care (PNC) is the third element of this continuum of care and provides the mother with important information on how to care for herself and her new-born baby in the first forty-two days of delivery, in addition to monitoring early infant developmental miles and wellbeing.[1,3]

The immediate postnatal period is the first twenty-four hours following childbirth (whether at home or in a health facility), during which the baby's physiology adapts to its surrounding and the mother's risk of postnatal haemorrhage (causing at least thirty (30) per cent of maternal mortality in Africa and Asia) is very high. Day two (2) through to seven (7) is defined as the early postnatal period while the period from day eight (8) through to forty-two (42) as the late postnatal period.[4] The World Health Organization (WHO) recommends that there should be at least four PNC contacts for all mothers and new-borns; the first contact within twenty-four hours after birth, then follow-up contacts at day three (forty-eight to seventy-two hours), between days seven and fourteen and at six weeks after birth.[5] There should also be extra contacts for babies needing

extra care (*i.e*. low birth weight or those whose mothers have HIV) who should have two or three additional visits in addition to the routine visits.[6] Postnatal care aims to address the following key areas; prevention of complications during the post-natal period by managing for anaemia and assessing for bleeding and fever; provision of care to enhance rapid restoration of the mother to optimum health by providing nutritional support and use of insecticidal nets; monitoring of adequacy of breast feeding and providing breast feeding support; provision of family planning services; provision for referral for complications such as bleeding, infections, or post-natal depression, counsel on danger signs; and provision of basic health education to the mother/ family.[2]

Extra care is required for low birth weight (LBW) or small babies and other vulnerable babies, such as those born to HIV-infected mothers. The majority of new-born deaths occur in LBW babies, many of whom are preterm.[6,7]A third of neonatal deaths could be saved with simple basic care such as; identification of the small baby, assessment for danger signs with management or referral as appropriate, provision of extra support for breastfeeding, including expressing milk and cup feeding; provision of warmth promotion and temperature management such as skin-to-skin care or Kangaroo Mother Care and provision of extra care for babies whose mothers are HIV-positive, particularly for feeding support.[6,7]

Every year, four million infants die globally within their first month of life, representing nearly 40% of all deaths of children under age 5 years old, over 90% of all new-born deaths occur in developing countries, especially in South Asia and Sub-Saharan Africa.[1] Globally, Nigeria ranks second only to India in neonatal mortality, a quarter of a million neonates die annually in Nigeria, which translates to approximately 700 neonates every day.[8] Despite reported and established importance of postnatal care, it remains the most neglected phase of obstetric service chain.[7] Most often health care workers place emphasis on the 42nd day PNC (*i.e.* sixth week PNC visit) this can best be described as a visit for neonatal survivors and in extreme cases they are not even reminded to come for any visit.[6] A high proportion maternal and neonatal mortality are preventable if PNC are instituted early.[1,3]

This study aimed to assess the level of postnatal care (PNC) uptake and associated factors among nursing mothers in Benin City, Edo State for improved health outcomes.

## Materials and Methods

A facility based descriptive cross sectional study was carried out in University of Benin Teaching Hospital (UBTH), Benin City, Edo State, Nigeria between September 2015 to August 2016. The Univesity of Benin Teaching Hospital (UBTH) is a tertiary health facility located in the Egor Local Government Area of Edo State, established in 1973. Over the years, service delivery in UBTH has expanded tremendously with an in-patient capacity of over 800 beds. The UBTH has thirty-three departments offers a wide range of services including preventive, curative and rehabilitative care, immunization clinics are run daily in General patients Clinic and Institute of Child health respectively.[9] An estimated sample size of 220 nursing mothers was calculated using Cochran's formula for simple proportion[10] based on prevalence of postpartum family planning uptake of 13% from a previous study.[11] Data was collected using pretested structured interviewer administered questionnaires sub-divided into sections on socio-demographic characteristics of respondents, knowledge and attitude towards PNC and PNC uptake. Data collected was sorted for completeness, coded and

**Table 1. Knowledge of postnatal care among respondents in Benin City, Edo State.**

| Variables | Frequency (n = 220) | Percent (%) |
|---|---|---|
| Heard of postnatal care | | |
| Yes | 209 | 95.0 |
| No | 11 | 5.0 |
| Sources of information* | | |
| Doctors and health workers | 193 | 87.7 |
| Media | 73 | 33.2 |
| School | 44 | 20.0 |
| Books | 17 | 7.7 |
| Family members | 6 | 2.7 |
| Religious places | 1 | 0.5 |
| Aware of recommended time of stay at health facility after childbirth | | |
| Yes | 176 | 79.1 |
| No | 44 | 20.9 |
| How long should you stay | | |
| 1day | 8 | 4.6 |
| 2days | 163 | 93.7 |
| >2days | 5 | 1.7 |
| Awareness on need for medical check while on admission | | |
| Yes | 205 | 92.3 |
| No | 15 | 7.7 |
| Awareness of the recommended time for baby's first Bath | | |
| Yes | 216 | 98.2 |
| No | 4 | 1.8 |
| Time for Baby's first Bath (n=216) | | |
| Day 1 | 214 | 99.1 |
| Day 2 | 2 | 0.9 |
| Awareness of the recommended care for the umbilical stump | | |
| Yes | 206 | 93.6 |
| No | 14 | 6.4 |
| Care of umbilical stump*(n=206) | | |
| Apply antibiotic cream | 108 | 52.4 |
| Methylated spirit | 31 | 15.4 |
| Left as such | 25 | 12.1 |
| Coconut oil | 24 | 11.7 |
| Medicated powder | 18 | 8.7 |
| Awareness of immunization, yes | 220 | 100.0 |
| Awareness of importance of immunization, yes | 220 | 100.0 |
| Importance of Immunization | | |
| Protects baby from disease (Correct) | 199 | 90.5 |
| Cures illness (Incorrect) | 15 | 6.8 |
| Prevents excessive crying (Incorrect) | 6 | 2.7 |
| Awareness of exclusive breast feeding, yes | 220 | 100.0 |
| Definition of exclusive breastfeeding | | |
| Feeding baby breastmilk only till 6months old (Correct) | 199 | 90.5 |
| Feeding baby breastmilk and water for 6months (Incorrect) | 15 | 6.8 |
| Feeding baby breastmilk only regardless of the duration (Incorrect) | 6 | 2.7 |
| Awareness of Jaundice | | |
| Yes | 173 | 78.6 |
| No | 47 | 21.4 |
| Definition of jaundice (n=173) | | |
| Yellowness of eyes and skin (Correct) | 144 | 65.5 |
| Illness from lack of exposure to sunlight (Incorrect) | 21 | 9.5 |
| Fever (Incorrect) | 6 | 2.7 |
| Excessive crying (Incorrect) | 2 | 0.9 |

*Multiple responses.

analyzed using IBM SPSS version 21.0 Statistical software. Knowledge of PNC was assessed using a total of 22 questions. A point score of one (1) was given for every correct response and zero (0) for every incorrect response making a total point score of 22. A total percentage score of 75.0% and above was classified as good knowledge, score of 50.0 to 74.9% was classified as fair knowledge and a score less than 50.0% was classified as poor knowledge. Attitude towards postnatal care was assessed using 10 questions, score of one (1) was given for every correct response and point score of zero (0) for every incorrect response, giving a maximum score of 10, and this was converted into percentage. A percentage score of 50.0% and above was classified as positive attitude towards PNC (*i.e.* being inclined towards or in support of PNC), while a percentage score of less than 50.0% was classified as negative attitude (i.e. not inclined towards PNC or not in support of PNC). Postnatal care uptake was assessed and grouped as 'ever" and "never" for respondents that attended at least one (1) PNC visit and no visit respectively. Results obtained were analyzed and presented as prose, frequency tables, charts and contingency tables. Level of significance was set at 95% confidence interval and P<0.050.

Ethical clearance was obtained from the Research and Ethics Committee (REC), College of Medical sciences, University of Benin, Edo State. While informed consent was obtained from the respondent before participation after full explanation of the study objectives. The respondents were informed that participation in the study was voluntary and that there were no penalties or loss of benefits for refusal to participate in the study or withdrawal from it. Health education on postnatal care (PNC) and its benefits were given to the respondents after the study with the aim of improving on respondents prior knowledge and future uptake.

## Results

The mean age of respondents studied was 30.0±3.5 years. Most 187 (85.0%) of the respondents were between 25-34 years. Two hundred and seventeen (98.6%) were Christians. In relation to ethnicity 44 (20.0%) were Benin, Esan 32 (14.5%), Urhobo 31 (14.1%), Igbo 24 (10.9%) and Yoruba 17 (7.7%). Two hundred and eight (94.1) were ever married while 13 (5.5%) were never married. One hundred and thirty-nine (67.9%) had been married for ≤4 years while 121 (55.0%) of respondents studied were multiparous. In relation to educational status 107 (48.8%) had secondary level of education. More than half of the respondents 113 (51.4%) were self-employed. Two hundred and five (93.2%) of the respondents

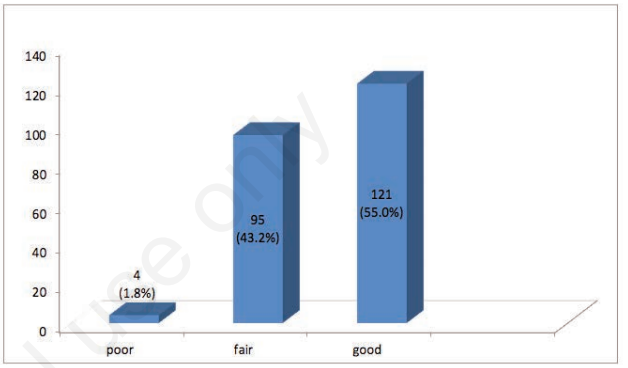


**Figure 1. Composite knowledge on postnatal care among respondents.**

**Table 2. Factors associated with knowledge of postnatal care among respondents.**

| Variables | Knowledge of postnatal care (n=220) Freq (%) Poor | Fair | Good | $\chi^2$ | P-value |
|---|---|---|---|---|---|
| Age group (years) | | | | | |
| 15-24 | 0 (0.0) | 9 (60.0) | 6 (40.0) | 2.624* | 0.602 |
| 25-34 | 4 (2.1) | 80 (42.8) | 103 (55.1) | | |
| ≥35 | 0 (0.0) | 6 (33.3) | 12 (66.7) | | |
| Marital status | | | | | |
| Never married | 0 (0.0) | 5 (41.7) | 7 (58.3) | 0.118* | >0.999 |
| Ever married | 4 (1.9) | 90 (43.3) | 114 (54.8) | | |
| Parity | | | | | |
| ≤ 4 | 4 (1.9) | 94 (45.4) | 109 (52.7) | 10.961 | 0.027 |
| > 4 | 0 (0.0) | 1 (7.7) | 12 (92.3) | | |
| Level of education | | | | | |
| Primary | 2 (8.7) | 13 (56.5) | 8 (34.8) | 12.607 | 0.013 |
| Secondary | 2 (1.9) | 49 (45.8) | 56 (52.3) | | |
| Tertiary | 0 (0.0) | 22 (36.7) | 77 (63.3) | | |
| Religion | | | | | |
| Christianity | 4 (1.8) | 94 (43.1) | 120 (55.0) | 0.068 | 0.967 |
| Islam | 0 (0.0) | 1 (50.0) | 1 (50.0) | | |
| Employment Status | | | | | |
| Unemployed | 0 (0.0) | 1 (100.0) | 0 (0.0) | 7.324 | 0.120 |
| Self Employed | 4 (3.5) | 53 (46.9) | 56 (49.6) | | |
| Employed | 0 (0.0) | 41 (38.7) | 65 (61.3) | | |
| ANC registration | | | | | |
| No | 2 (13.3) | 12 (80.0) | 1 (6.7) | 23.631 | < 0.001 |
| Yes | 2 (1.0) | 83 (40.5) | 120 (58.5) | | |

*fisher's exact

studied registered for antenatal care (ANC) while 218 (99.1%) delivered in a health facility.

In relation to knowledge of postnatal care (Table 1) 209 (95.0%) of respondents studied had heard of the term postnatal care, doctors and other health care workers 193 (87.7%) were their main source of information. Majority 176 (79.1%) said they were aware of the recommended time they ought to stay in the health facility after childbirth, most 163 (93.7%) said the recommended time was 2 days. Most were aware of the recommended care for the umbilical cord stump, more than half 108 (52.4%) chose application of antibiotic cream.

All of them 220 (100.0%) had heard of immunization and think it is important. Majority of the respondents 192(87.3%) said it protects babies from diseases. All of them 220 (100.0%) had heard of immunization and think it is important. Majority of the respondents 192(87.3%) said it protects babies from diseases About 3/4$^{th}$ of them 173 (78.6%) had heard of jaundice. All of them had heard of exclusive breastfeeding. Most of the respondents 199 (90.5%) said exclusive breastfeeding is feeding baby breastmilk only till 6months. Majority 144 (83.2%) of those who had heard of jaundice said it is yellowness of eyes and skin. Most of them 131 (75.7%) of them said they would consult a doctor if their child has jaundice (Table 1).

More than half of the respondents 121 (55.0%) had good overall knowledge on postnatal care as against 95 (43.2%) and 4 (1.8%) that had fair and poor overall knowledge respectively (Figure 1).

In relation to factors associated with knowledge of postnatal care (Table 2) increasing level of education (P=0.013), parity (P=0.027) and ANC registration (P<0.001) were identified as significant factors associated with it. Age group (P=0.532), marital status (P=0.877), employment status (P=0.120), religion (P=0.967) were not significant factors associated with knowledge of PNC.

In relation to attitude towards postnatal care (Table 3) over 4/5$^{th}$ 187 (85.0%) agreed that postnatal care is important. About 3/4$^{th}$ 173 (78.6%) agreed that cord stump should be kept clean and dry. Over 4/5$^{th}$ 189 (85.9%) agreed that exclusive breastfeeding should be encourage. Over 2/3$^{rd}$ 152 (69.1%) agreed that breastmilk is sufficient for the baby for the first 6months of life. About 3/4$^{th}$ of the respondents 170 (77.3%) agreed that babies should be breastfed as compared to 1 (0.5%) who strongly disagreed. Majority 168 (76.4%) agreed that babies should be immunized, 2/5$^{th}$ 88 (40.0%) disagreed that immunization can cause illness in a child. Almost all of the respondents 212 (96.4%) agreed that keeping babies warm is important. More than half of them 127 (57.8) agreed that family planning should not be used immediately after childbirth. Most of them 183 (83.2%) agreed that male partner should be fully involved in family planning. In relation to overall attitude of respondents towards postnatal care 30 (13.6%) and 190 (86.4%) had negative and positive attitude towards postnatal care respectively.

In relation to factors associated with attitude towards postnatal care (Table 4) Age of respondents (P=0.039), employment status (P=0.012), Knowledge of PNC (P<0.001) were identified as significant factors associated with it. Level of education (P=0.073), marital status (P=0.877), ANC registration (P=0.972) parity (P=0.053), religion (P=0.132) were not significant factors associated with knowledge of PNC.

Finally, in relation to factors associated with postnatal care (PNC) uptake (Table 5) ANC registration (P<0.001), Knowledge of PNC (P=0.002) and Attitude towards PNC (P=0.013) were identified as significant factors associated with it. Age of respondents (P=0.186), Level of education (P=0.663), marital status (P=0.076), ANC registration (P=0.972) parity (P=0.165), employment status

**Table 3. Attitude of respondents towards postnatal care.**

| Variables | Frequency (N = 220) | Percent (%) |
|---|---|---|
| Postnatal care is important | | |
| Strongly Agree | 21 | 9.0 |
| Agree | 187 | 85.5 |
| Indifferent | 12 | 5.5 |
| Disagree | 0 | 0.0 |
| Strongly Disagree | 0 | 0.0 |
| Cord stump should be kept clean and dry | | |
| Strongly agree | 30 | 13.6 |
| Agree | 173 | 78.6 |
| Indifferent | 10 | 4.6 |
| Disagree | 7 | 3.2 |
| Strongly Disagree | 0 | 0.0 |
| Exclusive breastfeeding should be encouraged | | |
| Strongly Agree | 28 | 12.7 |
| Agree | 189 | 85.9 |
| Indifferent | 0 | 0.0 |
| Disagree | 2 | 0.9 |
| Strongly disagree | 1 | 0.5 |
| Breastmilk is sufficient for the baby for the first 6months | | |
| Strongly Agree | 21 | 9.5 |
| Agree | 152 | 69.1 |
| Indifferent | 14 | 6.4 |
| Disagree | 27 | 12.3 |
| Strongly disagree | 6 | 2.7 |
| Baby should be breastfed immediately after birth | | |
| Strongly Agree | 26 | 11.8 |
| Agree | 170 | 77.3 |
| Indifferent | 6 | 2.7 |
| Disagree | 17 | 7.7 |
| Strongly disagree | 1 | 0.5 |
| All babies should be immunized | | |
| Strongly Agree | 25 | 11.4 |
| Agree | 168 | 76.4 |
| Indifferent | 19 | 8.6 |
| Disagree | 8 | 3.6 |
| Strongly disagree | 0 | 0.0 |
| Immunization can cause illness in a baby | | |
| Strongly agree | 3 | 1.4 |
| Agree | 60 | 27.3 |
| Indifferent | 39 | 17.7 |
| Disagree | 88 | 40.0 |
| Strongly disagree | 30 | 13.6 |
| Keeping baby warm is important | | |
| Strongly agree | 33 | 15.0 |
| Agree | 179 | 81.4 |
| Indifferent | 3 | 1.4 |
| Disagree | 2 | 0.9 |
| Strongly disagree | 3 | 1.4 |
| Family planning should not be used immediately after childbirth | | |
| Agree | 124 | 56.4 |
| Strongly agree | 3 | 1.4 |
| indifferent | 43 | 19.5 |
| Disagree | 30 | 13.6 |
| Strongly disagree | 20 | 9.1 |
| Male partner should be fully involved in family planning | | |
| Strongly agree | 35 | 15.9 |
| Agree | 148 | 67.3 |
| Indifferent | 31 | 14.1 |
| Disagree | 6 | 2.7 |
| Strongly disagree | 0 | 0.0 |
| Composite attitude score | | |
| Positive | 190 | 86.4 |
| Negative | 30 | 13.6 |

(P=0.379) and religion (P=0.379) were not significant factors associated with PNC uptake.

## Discussion

The mean age of respondents studied fell within that for women of reproductive age (15-49 years), this have been reported in several studies for nursing mothers.[12-15] Most of the respondents studied were Christians this is in keeping with the location of study, and this has been reported in other studies conducted in Benin City[14] and findings from the 2013 NDHS report.[15]

In this study, a greater proportion of respondents had completed secondary level of education, this high level of education among nursing mothers has been reported in previous studies in Benin City,[16] Ibadan[12] and also report from the National Population Commission[17] for the study area. The high level of awareness and knowledge of postnatal care identified in this study is possibly a reflection of the high level of literacy reported by respondents in the study area in addition to the urban setting of the study area. This may be because educated women are more likely to source out information concerning their health and that of their babies, helping them to to make informed choices on their health needs and that of their children. This finding is in concordance with a study done in 2015 in Nepal where knowledge on postnatal care was found to increase with increasing level of education.[18]

A higher proportion of respondents studied were multiparous, this is in keeping with a study done in Anambra state.[19] This could be a reflection of culture-religious sentiment of respondents as people in this part of the country tend towards large family size for economic benefit. Increasing parity of respondents was significantly associated with increased knowledge of PNC possibly due to continuous reinforcement of information and health talk during ANC and other health facility engagement. In contrast another study in Ethiopia[20] did not identify parity as a significant factor influencing knowledge of PNC. It will also be important to state that ANC registration was a significant player in the area of knowledge of PNC as respondents who registered for ANC were more knowledgeable about PNC than those who did not. This has further buttressed the importance of ANC registration as a critical game changer in promoting maternal and child health outcomes. The high level of Knowledge of PNC reported in this study was similarly reported in Ethiopia.[21]

In relation to attitude towards PNC majority of the respondents had positive attitude towards postnatal care, this is similar to a study carried out in Russia.[22] Increasing age of respondents significantly influence attitude towards PNC in this study. Older respondents are more likely to register for ANC, be more mature with more pregnancy related experiences. This is in keeping with other studies where older respondents and those with higher level of education had positive attitude towards postnatal care.[23,24] This finding could be attributed to the fact that educated individuals may have better knowledge on postnatal care and thus exhibit better attitude towards PNC compared to respondents that are less knowledgeable. This study identified that respondents with increasing knowledge of PNC had better attitude towards PNC and

**Table 4. Factors associated with attitude towards postnatal care among respondents.**

| Variables | Attitude towards postnatal care (PNC) (n=220) Freq (%) | | $\chi^2$ | P-value |
|---|---|---|---|---|
| | Positive | Negative | | |
| Age group (years) | | | | |
| 15-24 | 13 (86.7) | 1 (13.3) | | |
| 25-34 | 165 (88.2) | 22 (11.8) | 3.363 | 0.186 |
| ≥35 | 12 (66.7) | 6 (33.3) | | |
| Marital status | | | | |
| Never married | 9 (75.0) | 3 (25.0) | 3.142 | 0.076 |
| Ever married | 181 (87.0) | 27 (13.0) | | |
| Parity | | | | |
| ≤ 4 | 181 (87.4) | 26 (12.6) | 5.885 | 0.053 |
| > 4 | 9 (69.2) | 4 (30.8) | | |
| ANC Registration | | | | |
| No | 13 (86.7) | 2 (13.3) | 0.001 | 0.972 |
| Yes | 177 (86.3) | 28 (13.7) | | |
| Level of education | | | | |
| Primary | 21 (91.3) | 2 (8.7) | 5.244 | 0.073 |
| Secondary | 97 (90.7) | 10 (9.3) | | |
| Tertiary | 72 (80.0) | 18 (20.0) | | |
| Employment status | | | | |
| Unemployed | 1 (100.0) | 0 (0.0) | 8.844 | 0.012 |
| Self Employed | 105 (92.9) | 8 (7.1) | | |
| Employed | 84 (79.2) | 22 (20.8) | | |
| Religion | | | | |
| Christianity | 189 (86.7) | 29 (13.3) | 2.266 | 0.132 |
| Islam | 1(50.0) | 1 (50.0) | | |
| Knowledge of PNC | | | | |
| Poor | 4 (100.0) | 0 (0.0) | 20.638 | < 0.001 |
| Fair | 93 (97.9) | 2 (2.1) | | |
| Good | 93 (76.9) | 28 (23.1) | | |

*fisher's exact

**Table 5. Factors associated with postnatal care uptake among respondents.**

| Variables | Postnatal care (PNC) uptake (n=220) Freq (%) | | $\chi^2$ | P-value |
|---|---|---|---|---|
| | Never | Ever | | |
| Age group (years) | | | | |
| 15-24 | 7 (46.8) | 8(53.3) | 3.363 | 0.186 |
| 25-34 | 48 (25.7) | 139 (74.3) | | |
| ≥35 | 6 (33.3) | 12 (66.7) | | |
| Marital status | | | | |
| Never married | 6 (50.0) | 6 (50.0) | 3.142 | 0.076 |
| Ever married | 55 (26.4) | 153 (73.6) | | |
| Parity | | | | |
| ≤ 4 | 58 (28.0) | 149 (72.0) | 3.604 | 0.165 |
| > 4 | 3 (23.1) | 10 (76.9) | | |
| ANC Registration | | | | |
| No | 14 (93.3) | 1 (6.7) | 34.575 | < 0.001 |
| Yes | 47 (22.4) | 158 (77.1) | | |
| Level of education | | | | |
| Primary | 7 (30.4) | 16 (69.6) | 0.822 | 0.663 |
| Secondary | 32 (29.9) | 75 (70.1) | | |
| Tertiary | 22 (24.4) | 68 (75.6) | | |
| Religion | | | | |
| Christianity | 61 (28.0) | 157 (72.0) | 0.774 | 0.379 |
| Islam | 0 (0.0) | 2 (100.0) | | |
| Employment Status | | | | |
| Unemployed | 0 (0.0) | 2 (100.0) | 3.212 | 0.379 |
| Self Employed | 25 (34.7) | 47 (65.3) | | |
| Employed | 36 (24.7) | 110 (75.3) | | |
| Knowledge of PNC | | | | |
| Poor | 2 (50.0) | 2 (50.0) | 12.460 | 0.002 |
| Fair | 37 (38.9) | 58 (61.1) | | |
| Good | 22 (18.2) | 99 (81.8) | | |
| Attitude towards PNC | | | | |
| Negative | 14 (46.7) | 16 (53.3) | 6.218 | 0.013 |
| Positive | 47 (24.7) | 143 (75.3) | | |

*fisher's exact



this finding was statistically significant. This study identified high postnatal care uptake by nursing mothers, this high PNC uptake was significantly influenced by ANC registration, knowledge of PNC and attitude towards PNC. Antenatal care, institutional/skilled attendance at delivery and postnatal care are three very important interventions required in continuum to promote optimum maternal and child health by reducing maternal and neonatal morbidity and mortality.[1,2] It is evident from this study that ANC registration among respondents was a critical gate pass exposing them to that unique opportunity to improve their knowledge base for correct information to make informed decision and improve their attitude towards PNC and eventual uptake. ANC registration is therefore a critical start point in the continuum of care for the pregnant women, her unborn child till delivery and the first six weeks of live. PNC is a critical public health intervention to address maternal and neonatal morbidity and mortality in developing countries and globally.

## Conclusions

Postnatal care uptake was high among study participants. ANC registration was a major determinant of postnatal care uptake in the study area, in addition to also significantly influencing knowledge of PNC and attitude towards PNC among nursing mothers studied. There is need to sustain and improve on the gains of postnatal care (PNC) uptake among nursing mothers in Benin City, by promoting sensitizations campaigns to promote ANC registration and attendance among pregnant women.

### Limitation of study

The findings of this study were based on self-report as some information given by respondents may not be verified as such could affect the validity of the study findings.

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