



Research Paper

## Awareness and Acceptability of Preventive Cervical Cancer Screening among Women Attending Tertiary Health Facilities in Northwestern Zone, Nigeria

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### Abstract

**Background:** Awareness and Acceptability of preventive cervical cancer was low among the population in the current study, 711 women attending tertiary health facilities eligible for the study with a response rate of 87%. **Objectives:** To evaluate the level of awareness and acceptability of preventive cervical cancer screening in three tertiary health facilities in Northwestern Zone, Nigeria **Study design:** cross-sectional survey design. **Study Setting:** Primary data was used from three health facilities, which are Jigawa state, Kaduna and Katsina state **Method:** The multi-stage sampling, in the first stage, three (3) out of seven (7) Northwestern states were chosen. In the second stage, Teaching hospitals were purposely selected as the tertiary hospitals for the study. Purposive sampling was used in the third stage where women who attend ante-natal clinic and those who attend Obstetric & Gynecological clinics were purposely selected. The respondent's questionnaire contains 11 and 12 items to collect data from the respondents on acceptability. Data was analyzed using descriptive and inferential statistics-bivariate and simple linear regressions, **Results:** (64.6%) and (48%) of the respondents had low level of awareness and acceptability, regression analyses indicated that, every unit increase in awareness, there is likelihood of increase in acceptability to preventive cervical cancer screening. The model explained 28% variance of cervical cancer screening. The relationship between the awareness and acceptability was significant, with correlation coefficient  $r = 0.498$ , ( $p < .001$ ). **Conclusion:** the level of awareness and acceptability of preventive cervical among the study population is low. Therefore, the following are **recommended:** proper sensitization on Awareness and Acceptability of Preventive Cervical Cancer Screening and Good Patronizes amongst the Target Population

**Keyword:** Awareness, Acceptability, preventive cervical cancer screening

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### I. Introduction

Cervical cancer is one of cancer that is preventable when early detected, with proper awareness, acceptability to screening and proper treatment. Despite the proliferation of cervical cancer amongst women under study population, there is a lot of challenges and lack of awareness toward participation of cervical cancer screening. For effective cervical cancer prevention, there is need for both primary and secondary methods of prevention, immunization and screening, having proven to be reducing occurrence of mortality of the disease (Kojalo et al., 2023). Cervical cancer is the most common genital cancer and one of the leading causes of death among women of reproductive age population. Fortunately, this cervical cancer is preventable through screening (Olubodun et al., 2023). Preventive Cervical cancer is a major way of preventing cancer diseases that affect women of child bearing age. A study by Rayner et al., (2023) in USA revealed that, cervical cancer, is preventable disease, they agreed with WHO's global strategy should be adapted in order to eradicate the cervical cancer by 2030. There is need for advocacy on the significant of health public policies on timely prevention and management of cervical cancer (Dantas et al., 2020). They recommended that, health care providers to have proper awareness on prevention and causes of the disease (Dozie et al., 2021). To encourage all women to have access to cervical cancer screening services and treatment, and there is need to fortifying healthcare systems (Jallah et al., 2023). On the other hand Maitanmi et al., (2023) concluded, there is need to improve awareness on cervical cancer screening among women. Globally in 2020, there were an estimated 604 127 cervical cancer cases and 341 831 deaths (Singh et al., 2023).

## II. MATERIALS AND METHODS

### Study Design

This study adopted a cross-sectional research design to investigate Awareness and Acceptability of Preventive Cervical Cancer Screening among Women Attending Tertiary Health Facilities in Northwestern Nigeria.

### Study Population and Sample Size

The study population comprises women attending antenatal and obstetrics/gynecology clinics in selected tertiary health facilities. A sample size of 711 respondents was determined using Cochran's (1977) formula for continuous variables.

### Sampling Procedure

A multistage sampling technique was employed. In the first stage, three states were selected from the seven states in Northwestern Nigeria using simple random sampling through balloting. The selected states were Jigawa, Kaduna, and Katsina. The second stage, one tertiary teaching hospital was purposively selected from each state. The third stage, eligible women attending antenatal clinics and obstetrics/gynecology clinics were purposively selected to participate in the study.

### Instrument for Data Collection

The instrument used for data collection was structured questionnaire, which contained eleven (11) items to assess acceptability and (12) to assess awareness of preventive of cervical cancer screening, which would be statements that are intended to measure the key research constructs. The structured questionnaire for both pilot test and actual survey to measure the research constructs.

### Data Collection Procedure

The data was collected by the researcher and research assistants. The research assistants were trained about the content of the questionnaire and logical tactics for handling respondents. The data collection team was thoroughly monitored by the researcher during the data collection period. The questionnaires were administered to the respondents through method of self-administration.

### Data Analysis

Data transformation was done; descriptive and inferential statistics were used. The data was analyzed using IBM SPSS Version® 22. It was analyzed for bivariate analysis, descriptive analysis, Awareness and Acceptability ONE –WAY ANOVA and correlation test were used ( $p < 0.05$  level of significance associated).

### Ethical Considerations

An introductory letter was obtained from Maryam Abacha American University, Niger which facilitated in obtaining ethical clearance from the Ethics Committees of the participating tertiary health facilities. Written informed consent was obtained from all participants before data collection. Confidentiality, anonymity, and voluntary participation were ensured throughout the study.

## III. RESULTS

### Demographic Characteristics of the Respondents

**Table 1** Contain socio-demographic characteristics of the respondents, the result on age distribution revealed that, those whose age ranges between 40-49 years of age were 247 (39.9%) has highest score. **Ethnicity:** majorities of the respondents were Hausa. **State:** Kastina has majorities of respondents 217 (35), **Religion:** majority of the respondents in this study were Muslim 426 (68.8%). **Level of education:** Distribution of the respondents shows that, Tertiary 251 (40.5%). This implies that, majority of the respondents had attained Tertiary education level, the reason could be location, meaning the study was conducted in urban areas they is a possibility majority of population could be educate. **Marital Status:** result reveled that, Married has 350 (56.5%) majority of the respondents.

**Table 1: Socio-Demographic Characteristics**

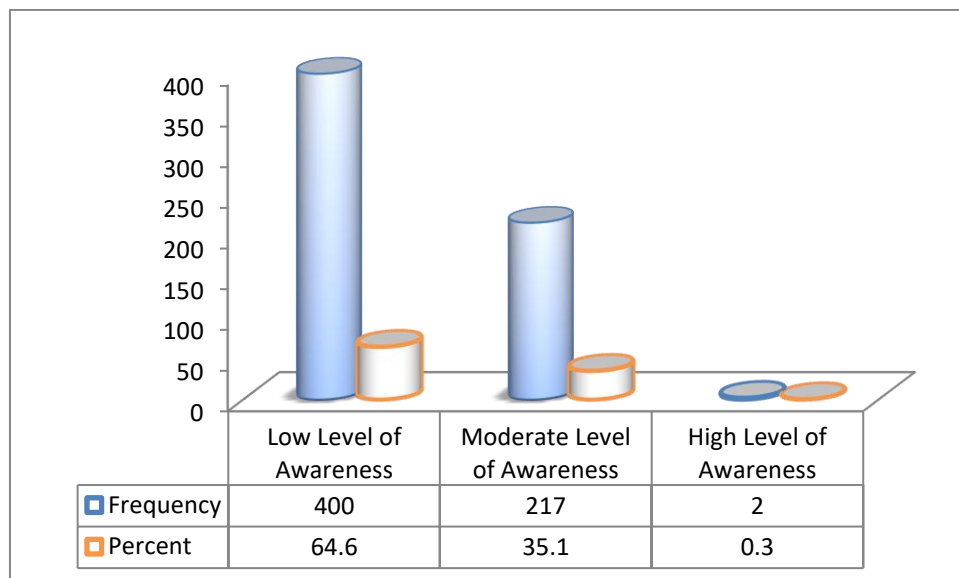
| Variables | Group    | n (%)      | MEAN         |
|-----------|----------|------------|--------------|
| Age       | 29-30    | 144 (23.3) | 2.31 (±.930) |
|           | 30-39    | 174 (28.1) |              |
|           | 40-49    | 247 (39.9) |              |
|           | 50 above | 54 (8.7)   |              |
| Ethnicity | Hausa    | 410 (66.2) | 1.48 (±.738) |
|           | Fulani   | 118 (19.1) |              |
|           | Others   | 91 (14.7)  |              |

|                           |              |            |
|---------------------------|--------------|------------|
| <b>State</b>              | Jigawa       | 196 (31.7) |
|                           | Katsina      | 217 (35)   |
|                           | Kaduna       | 206 (33.3) |
| <b>Marital Status</b>     | Single       | 115 (18.6) |
|                           | Married      | 350 (56.5) |
|                           | Widowed      | 85 (13.7)  |
|                           | Divorced     | 69 (11.2)  |
| <b>Religion</b>           | Islam        | 426 (68.8) |
|                           | Christianity | 146 (23.6) |
|                           | Others       | 47 (7.6)   |
| <b>Level of Education</b> | Non formal   | 96 (15.5)  |
|                           | Primary      | 116 (18.7) |
|                           | Secondary    | 156 (25.3) |
|                           | Tertiary     | 251 (40.5) |

Table 2 and 3 present data on level of awareness and acceptability on preventive cervical cancer screening, The finding shows that, the level of awareness and acceptability of preventive cervical cancer screening was low, 400 (64.6%) and 302 (48.8%). The outcome revealed that, the women in this study area were having low level of awareness and acceptability of preventive cervical cancer screening. The reason could be lack of regular health talk during antenatal and or lack of recommendation by health care personnel.

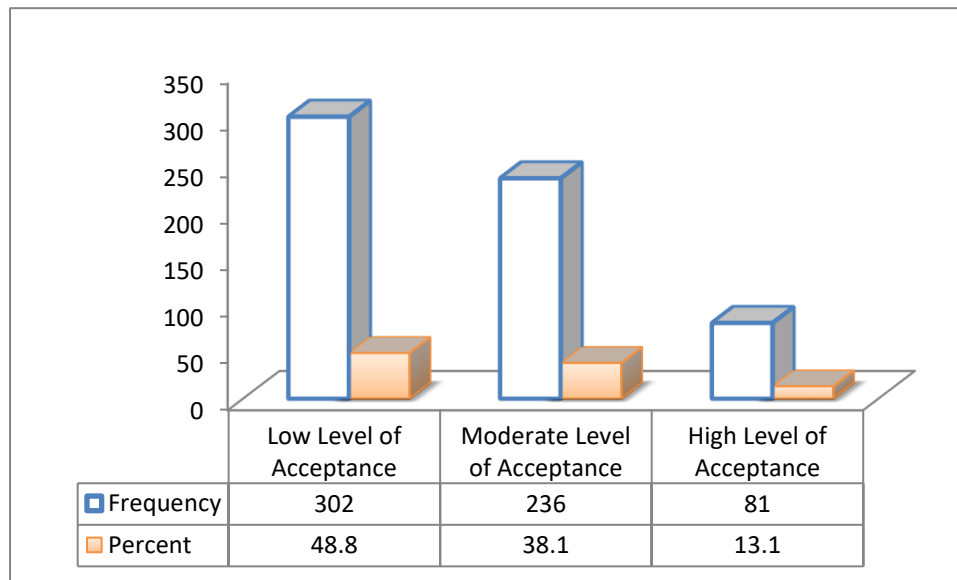
**Table 2 Level of Awareness on Preventive Cervical Cancer Screening**

| Level              | Freq.      | %          |
|--------------------|------------|------------|
| Low Awareness      | 400        | ( 64.6)    |
| Moderate Awareness | 217        | (35.1)     |
| High Awareness     | 2          | (0.3)      |
| <b>Total</b>       | <b>619</b> | <b>100</b> |



**Table 3 Level of Acceptability of cervical cancer screening**

| Level           | Freq.      | %          |
|-----------------|------------|------------|
| <b>Low</b>      | 302        | 48.8       |
| <b>Moderate</b> | 236        | 38.1       |
| <b>High</b>     | 81         | 13.1       |
| <b>Total</b>    | <b>619</b> | <b>100</b> |



#### Correlation Analysis between Awareness and Acceptability of Preventive Cervical Cancer Screening among Women Attending Tertiary Health Facilities

The relationship between the awareness, Pearson correlation was carried out and the result is presented in Table 4 the result shows that awareness has a positive relationship with acceptability. The relationship between the awareness and acceptability was significant, with correlation coefficient  $r = 0.498$ , ( $p < .001$ ). When examined the relationship between acceptability it was positively and statistically significant,  $r = 0.498$ ,  $p < .001$ .

**Table 4 Correlations Analysis between Awareness and Acceptability of Preventive Cervical Cancer Screening**

| Factors       | Preventive cervical cancer |       |
|---------------|----------------------------|-------|
|               | R                          | P     |
| Awareness     | -0.498                     | 0.001 |
| Acceptability | -0.498                     | 0.001 |

Correlation is significant at the 0.01 level (2-tailed).

#### Goodness of Fit of the Regression Model

The correlation coefficient (R) obtained from the model (0.498) shows that, the strength of association between dependent and independent variable is strong and positive. This outcome shows that, awareness and acceptability have strong relationship with preventive cervical cancer. On the other hand, R-square (the coefficient of determination) value obtained was (0.248), which means that 24.8% of preventive cervical cancer is explained by awareness and acceptability. The remaining percentage could be caused by the other factors that were not captured in the model. This outcome indicates very good model fitness.

**Table 5 Model Summary**

| Model | R    | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|------|----------|-------------------|----------------------------|
| 1     | .498 | .248     | .248              | 5.69423                    |

**a. Predictors: (Constant), Awareness**

#### The Simple linear Regression Result

The simple Linear Regression was conducted to examine the effect of independent variables Y = Awareness and the dependent variable = X1 (Acceptability), the regression model can be defined as defined as:

$$Y = \text{constant} + X_1 \times 1 + e$$

Where; Y: awareness

X1: Acceptability

e = Error term

The finding of the analysis is presented in Table 6. Among the independent variables, awareness (X1) has significant influence on acceptability with positive coefficient weight value of .504 and it was significant at 1% confidence level ( $p < 0.000$ ). This outcome shows that, for every unit increase in awareness, there is likelihood of increase in acceptability to preventive cervical cancer screening. Therefore, the higher the awareness the more likely higher level of acceptability of cervical cancer screening.

**Table 6 Regression Analysis**

| Variables  | Unstandardized Coefficients | Standardized Coefficients |      | T      | P-value |
|------------|-----------------------------|---------------------------|------|--------|---------|
|            | B                           | Std. Error                | Beta |        |         |
| (Constant) | 11.901                      | .953                      |      | 12.486 | .000    |
| Awareness  | .504                        | .035                      | .498 | 14.252 | .000    |

**Dependent Variable: Acceptability) = R .498, R square= .248, Adjusted R =.248**

#### IV. DISCUSSION

The overall result shows that, the respondents have low level of awareness and acceptability of preventive cervical cancer screening. The reason could be lack of health talk during antenatal lack of recommended by health care personnel, may also be associated to the private parts and always remain private parts many people do not want discuss issues regarding the position of cervix was inside the body and level of exposure might be responsible for the low level of awareness. The finding of this study is in line with previous studies conducted by Maitanmi et al. (2023), Pearce et al., (2023). Dozie et al., (2021), reported that, majority of the respondents have low level of awareness regarding the cervical cancer screening. Another study conducted in China reported that, majority of the respondents had inadequate level of awareness (Fengzhi et al., 2022). A study conducted in Indian reported that, inadequate level of awareness amongst their respondents (Srinath et al., 2022). Shin et al., (2021) a study conducted in Republic of Korea, revealed that, inadequate level of awareness on cervical cancer screening. The study conducted in Ghana revealed that, majority of the respondent's lack awareness on cervical cancer screening (Pearce1 et al., 2023). Roux et al., (2021) indicate that, inadequate awareness amongst the target population of cervical cancer screening. Eshete et al., (2020) conducted a study in Ghana the finding revealed that; majority of the respondents had low level of awareness. Olatubi et al., (2024) a study conducted in Nigeria found out that, majority of the respondents had low level of awareness. A study conducted in (Lagos) Nigeria showed that, majority of the participants lack aware of the cervical cancer screening or clinical feature and risk factor (Olubodun et al., 2022).

Gizaw et al., (2022) reported that, (64.7%) of the respondents have high level of awareness on cervical cancer screening; A study conducted in northwest (Zaria) Nigeria majority of the participants (51, 5%) were aware of cervical cancer screening (Onyeacho et al., 2023). The reasons might be as a result of majority of respondents were learning, pregnant and attending class of antenatal through health talk or health education and free screening services the previous is not in line with current study.

The finding of this study also reported that, there is low level of acceptability of cervical cancer screening which is in support with previous study which shows that the respondents has low level of acceptability of preventive cervical cancer screening (Eshete et al., 2020), might be as a result of lack of recommendation by health care personnel, as to include in routine investigation, absence of Symptoms and lack of policy on cervical cancer, or some women still do not perceive themselves to be at risk. Several studies conducted in Nigeria as cited by Olubodun et al., (2022) were in perceived decrease in acceptability of cervical cancer screening. To encourage women to be in active participation on cervical cancer screening, the community leaders should educate their member and create good rapport especially those at risk of developed cervical cancer. This corroborates with finding of research concluded that, there is low level of accepted of cervical cancer screening (Owolabi et al, 2023). Olatubi et al., (2024) in their studies indicated that, majority of the respondents did not accept cervical cancer screening. The acceptability of cervical cancer screening was low amongst the respondents (Gizaw et al, .2022).

The result is inconsistent with finding of Maitanmi et al., (2023), a study showed that, half of the respondents have high level of acceptability cervical cancer screening. Another outcome, about (76.8%) of his respondent had accepted cervical cancer screening; the study was conducted among HIV positive patience and has high level of education Maitanmi et al., (2023). Another research conducted in Europe reported that, women accepted cervical cancer screening (Jallah et al., 2023). A study conducted in northwest in (Zaria) Nigeria majority of the participants (67.5%) accepted cervical cancer screening and Pap smear (Onyeacho et al., 2023). Maitanmi et al (2023) shown a study on medical sciences students reported that, (86%.7) had accepted cervical cancer screening. The discrepancy might be due to the difference in the study population or the high level of acceptability might be a result of high level of awareness in their studies.

Furthermore, awareness has a positive relationship with acceptability were found to influence the preventive of cervical cancer screening among women attending tertiary health facilities in northwestern zone, Nigeria. In this study acceptability was found to be significantly. The previous study found out that, women who have the disease as severe were 2 times more likely to accept cervical cancer screening than those women who didn't have disease as not severe (Eshete et al., 2020). Gizaw et al., (2022), on the other hand women that are working with government were more likely to accept cervical screening compared to women who are not working. Woldetsadik et al (2020) conducted a study reported that, women who are living in the urban settlement are more likely to accepted cervical cancer screening than women living in the rural settlement. Women who delivery are more likely (8.92) to accept cervical cancer screening than the women who did not delivery (AOR=8.92, 95% CI=4.28–19.19) (Gizaw et al., 2022).

On the other hand this study was not in line Marie -Rachelle et al., (2024) women aged 30–65years are more likely not accept cervical cancer screening and women age 21- 29 years were more less likely to accept cervical cancer screening, also Hispanic, Asian, and American Indian/Alaska were more likely not accept cervical cancer screening while white women accept cervical cancer screening. A study shown in Eastern Ethiopia resolved that, majority of the respondents had accepted cervical cancer screening only fewer of them did not accept (Wakwoya et al., 2023).

**Limitations:** of this study comprise the study design, which would not allow findings to be generalized to the whole population of women of reproductive age in Nigeria. Strengths of this research were realized through the aims of the research. Simple random sampling technique (SRS) was used in selecting the health facilities. For future studies more association should be conducted on preventive cervical cancer.

## V. CONCLUSION AND RECOMMENDATIONS

In conclusion, this study revealed that, there was low level of awareness and acceptability of preventive cervical cancer. The model of the study can only explained 28% of awareness and acceptability of preventive cervical cancer screening. However the researcher recommended, taking enlightenment campaigns on cervical cancer screening to communities and various women gatherings and ensuring availability of free and adequate cervical cancer screening service at various health facilities to cut across primary, secondary and tertiary.

## REFERENCES

- [1]. Acharya, K., Bhattarai, N., Dahal, R., Bhattarai, A., Yuba Raj Paudel, Y., Dharel, D., Aryal, K., and Adhikari, K., (2024). Examining the availability and readiness of health facilities to provide cervical cancer screening services in Nepal: a cross-sectional study using data from the Nepal Health Facility Survey *BMJ Open* 2- 9 <https://doi.org/10.1136>
- [2]. Ayenew, A. A., Zewdu, B. F. and Nigussie, A. A. (2020). Uptake of cervical cancer screening Service and associated factors among age-eligible women in Ethiopia: Systematic review and meta-analysis. *Infect. Agent Cancer* 15(1), 1–17
- [3]. Cochran, W.G. (1977). *Sampling Techniques*. 3rd Ed. New York: John Wiley & Sons.
- [4]. Dantas de Oliveira,N.P., Santos S.,C.A., Nunes de Lima,K.Y., Canela M.C., Bezerra de Souza, D. L. (2020). Association of cervical and Breast Cancer Mortality with Socioeconomic indicators and Availability of Health Services, <https://doi.org/10.1016/j.canep.2019.101660>
- [5]. Dozie, U, W. Elebari B.L., Nwaokoro, J.C., Iwuoha, G.N., Emerole, C.O., kawi, A.J.,Chukwuocha, U.M., and Simplicius Dozie, I. N. (2021). Knowledge, attitude and perception on cervical cancer screening among women attending ante-natal clinic in Owerri west L.G.A, South-Eastern Nigeria: A cross-sectional. *Elsevier Ltd.* 1-8, <https://doi.org/10.1016/j>.
- [6]. Eshete,M., Atta,M.,A., and Yeshita, H.Y. (2022). Cervical Cancer Screening Acceptance among Women in Dabat District, Northwest Ethiopia, 2017: An Institution-Based Cross-Sectional Study *Obstetrics and Gynecology International*, 2-7, <https://doi.org/10.1155/2020/2805936>
- [7]. Fengzhi, Z., Manman, L., Xiaoxue, L., Hua, B., Jinling, G., and Hua, L. (2022). Knowledge of cervical cancer prevention and treatment, and willingness to receive HPV vaccination among college students in China, *BMC Public Health*, 2-8, <https://doi.org/10.1186/s12889-022-14718-0>
- [8]. Gizaw, T., A., Khatib, Z., Wolancho, M., Amdissa, M. and Bamboro, I. M. (2022) Uptake of cervical cancer screening and its predictors among women of reproductive age in Gomma district, South West Ethiopia: a community-based cross-sectional. *Infectious Agents and Cancer* 2 (10) 17:43 <https://doi.org/10.1186/s13027-022-00455->
- [9]. Jallah, J., Anjankar, A. and Nankong, F. A. (2023). Public Health Approach in the Elimination and Control of Cervical Cancer: *Open Access Review* 15(9), 2-9 DOI 10.7759/cureus.44543
- [10]. Kojalo, U., Tisler, A., Pama, K., Kivite-Urtane, A., Zodzika, J, Stankunas, M. Nicholas, B. N.,
- [11]. Mari N. M. and Uuskula, A. (2023). An overview of cervical cancer epidemiology and prevention in the Baltic States, *BMC Public Health*, 2-9, [https://doi.org/10.1186/s12889-023-15524-](https://doi.org/10.1186/s12889-023-15524-Marie-Rachelle, N., Pearl, A., Elfish, E. H. and Natalie, P. (2024). Non-use and inadequate use of cervical cancer screening among a representative sample of women in the United States, Life-Course Epidemiology and Social Inequalities in Health, volume 12, https://doi.org/10.3389)
- [12]. Maitanmi,O.J., Fabiyi,T.E., Eniola, O., Sansi,T.O., Josiah, B.O., Maitanmi, B., Ojewale, M.B.,Dairo, A.A., Adebiyi, D. A. and Akingbad, O. (2022). Knowledge and Acceptability of Cervical Cancer Screening among Female Undergraduates in Babcock University Ilishan-Remo, Ogun State, Nigeria. *Cancer Medical sciences* 1-10 <https://doi.org/10.3332>
- [13]. Olatubi, M.I., Ewoma, G.E., Ademuyiwa, G.O., Bello, C.B., Dosumu, T.O., Timothy, T., Famakinwa, T.T. and Faremi, F. A. (2024). Awareness and Uptake of Cervical Cancer Screening, Vaccination and Associated Factors among Female Undergraduates in Nigeria, *Nursing and Health Care*, 6, (1), 1284-1301, <https://dx.doi.org/10.4314>
- [14]. Onyeacho, O. D., Koledade, K.A. and Oguntayo, O. A. (2023). Awareness and Acceptance of Cervical Cancer Screening in Pregnancy among Antenatal Clinic Attendees in a Tertiary Hospital in Northwest Nigeria *J Med & Bas Sci Res.* 2023;4(1-2):1-8 DOI: 10.5281/zenodo.7482712

- [15]. Olubodun, T., Balogun, M.R., Odeyemi, A.K., Odukoya, O. O., Ogunyemi, A. O., Okafor, O. J., Okafor, I. P., Olubodun, B.A., Ogundele, O. P., Ogunnowo, B. and Akin O. A. (2023). Knowledge and Acceptability of Cervical Cancer Screening among Female Undergraduates in Babcock University Ilishan-Remo, Ogun State, Nigeria. *BMC Public Health* 2-10 <https://doi.org/10.3332>
- [16]. Owolabi, B.A., Akinyemi, O., Abiodun-Ojo, O.E. and Akinyemi O.O. (2024). Knowledge, Perception and Acceptance of Cervical Cancer Screening Among Women of Reproductive Age in Health Facilities in Ekiti State, Nigeria. *International Journal of Ebola, AIDS, HIV and Infectious Diseases and Immunity* 9, (1) 1-12, Doi: <https://doi.org/10.37745>
- [17]. Pearce, B., Aziato, L. and Achempim-Ansong, G. (2022) Exploring the Perspectives of Young Adults on Cervical Cancer Screening in the Western Region of Ghana: A Qualitative Enquiry *Asian Pac J Cancer Care*, 8 (1), 11-20, DOI:10.31557/APJCC.2023.8.1.11
- [18]. Shin, H.Y., Song, S.Y., Jun, J.K., Kim, K.Y., Kang, P. (2021) Barriers and strategies for cervical Cancer screening: What do female university students know and want? *PLoS ONE* 16(10): e0257529. <https://doi.org/10.1371/journal.pone.0257529>
- [19]. Srinath, A., Merode, F. V., Vasudeva, S., and Pavlova, M. (2023). Barriers to Cervical Cancer and Breast Cancer Screening Uptake in Low-income and Middle-income Countries: A Systematic Review. *Health Policy and Planning*, 38, (4)5-10, DOI: <https://doi.org/10.1093/heapol/czac10>
- [20]. Singh, D. J., erome Vignat, J., Lorenzoni, V., Eslahi, M., Ginsburg, O. and Lauby-Secretan, B. (2023). Global Estimates of Incidence and Mortality of Cervical Cancer in 2020: A Baseline Analysis of the WHO Global Cervical Cancer Elimination Initiative. *Lancet Glob Health* 11(2), 1-28, DOI: 10.1016/S2214-109X (22)005026-5-
- [21]. Roux, A. N., Kenfack, B., Ndjalla, A., Sormani, J., Wisniak, A., Tatrai, K. and Schmidt, N. (2021). Barriers to Cervical Cancer Prevention in Rural Cameroon: A Qualitative Study on Healthcare Providers' Perspective. *BMJ open* 11(6): e 043637
- [22]. Rayner, M., Welp, A., Stoler, M. H. and Cantrell, A. L. (2023). Cervical Cancer Screening Recommendations: Now and for the Future *PMCID: PMC10454304* 11,(16): 2273 Doi:10.3390/healthcare11162273
- [23]. Wakwoya, E. B. Gari, S. S. and Endalew, G. (2023) Precancerous Cervical Lesion Screening Acceptance among Women in Eastern Ethiopia. *MJ Open* 1-7 <http://dx.doi.org/10.1136/>
- [24]. Woldetsadik, A.B., Amhare, A.F., Bitew, S.T., Pei L, Lei J and Han J. (2020). Socio-demographic Characteristics and Associated Factors Influencing Cervical Cancer Screening among Women Attending in St Paul's Teaching and Referral Hospital, Ethiopia. *BMC Women's Health*; 20(1):1-9.