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Factors affecting uptakes of colorectal polyp screening of colorectal cancer among people aged 40 years and above in Imo state

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Abstract
Colorectal polpys prevalence has recently attracted the attention of public health experts all over the world because large number of people especially adults from fourty years and above are being diagnosed on daily basis and also the significant burden of colorectal cancer morbidity and mortality associated with it. This work was carried out to investigate factors affecting uptake of colorectal polyps screening for early detection of colorectal cancer among adults aged fourty years and above in Imo state, South Eastern Nigeria. The study was a population based and adopted a descriptive study design. The study adopted a sample size of 400 adults both male and female of 40 years and above. The study considered d independent variables such as gender, age,marital status, occupation, family history of colorectal cancer, levels of physical activities, cigarette smoking habits and alcohol consumption habit, monthly income, Local Government Area of residence, family size and diabetic status The study followed WHO stepwise approach for survey of non-communicable disease (i.e structured questionnaire and physical measurements). Data were analyzed using IBM-SPSS statistics version 23 and Microsoft Excel 2010 was used in drawing charts. Measured variables were summarized using descriptive statistics of mean and standard deviation. Graphical representations such as bar chart and pie charts were used to represent some of the results. Significant factors in the model were tested using Wald test. The level of significance was placed at 5% for the factors. Confidence interval was placed at 95% and odds ratio was calculated as a measure of the strength of the association between factors affecting uptake and colon cancer of interest in the study. The result showed higher number of participants among females as well as 50 -59 age group having the highest level of participation respectively. Alchol intake (p=0.03) and o smoking (p=0.05) were found to be insignificant in the study for colorectal polyps screening. Regression analysis showed that age had a significant role to play in the uptake of colorectal cancer as well as level of income among the participants. The study found secondary education to be significant in the adjusted analysis (p=0.011, 95%CI= 0.071 – 0.0708).

Keywords: colorectal cancer, prevalence, screening

Introduction
Colorectal cancer prevalence among adults is a chronic non-communicable health challenge that places morbidity and mortality burden to the public health system and the individuals at risk (WHO, 2015).High rates of participation has been consistently associated with screening efficacy in terms of mortality reduction as well as cost-effectiveness (Sirinukunwattana, Ahmed Raza, Yee-Wah Tsang, Snead, Cree, Rajpoot, 2016).
Colorectal cancer are cancers that arise from the inner lining of the colon (large intestine) and are very common due to Changes in the genetic material of cells lining the colon (American Cancer Society, 2017).

Materials and Method
Study Area
Imo state is one of the 36 states of Nigeria. It is located in the south eastern region of the country, specifically between the lower River Niger and the upper Imo River. It is inhabited mainly by the Igbo ethnic group whose major occupation is agriculture and trading. Owerri is the capital of the state and also its major city. Other cities in the state include Orlu, Okigwe, Mbaise, Oguta, Mbano and Obowo.

Data Collection Instrument
Data were collected using:
Risk assessment structured questionnaire
Physical extermination

Questionnaire Design
A pre-tested, self-administered, structured risk assessment questionnaire based on WHO stepwise approach to chronic disease risk factor surveillance (STEPS) instrument was developed and used .The language of the questionnaire was English.

Study Design
The design employed in this study was a descriptive design.

Sampling Technique
The sample size calculation will be calculated using the Taro Yamane formula for sample size calculation for a given population (Uniproject, 2021), formulated by the statistician Taro Yamane in 1967. The mathematical illustration of the Taro yamene formula is as follows:

$$n = N/1 + N(e)2$$

Where
n is the sample size
N is the population under study
e is the marginal error

The population under study is calculated from the 2016

projected population according to National Population Commission (NPC) of the Local Government areas under study. Five percent of this at risk adult population will be used for the study.

Thus for Orlu zone the population for the LGAs under study include Ohaji Egbema- 251,900, Oguta - 196,000, Oru East-153,900 while five percent of the entire population of each LGA was include 12,595,9,830and7,695 respectively, For Owerri Zone, the population for the LGA under study is Ikeduru-206,200, Owerri West-140,100 and Owerri Municipal- 172,600. Five percent of the population will be 8,085, 6,840 and 8,630 while Okigwe zone has Obowo-161,700 and Okigwe- 182,700 and five percent shall be 8,085 and 9,135 respectively. So using the formula n = N/1 + N (e) 2

Sample size n will be

N= (12,595+9,830+7,695 +8,085+6,840+8,630 +8,085 +9,135)

=70,895

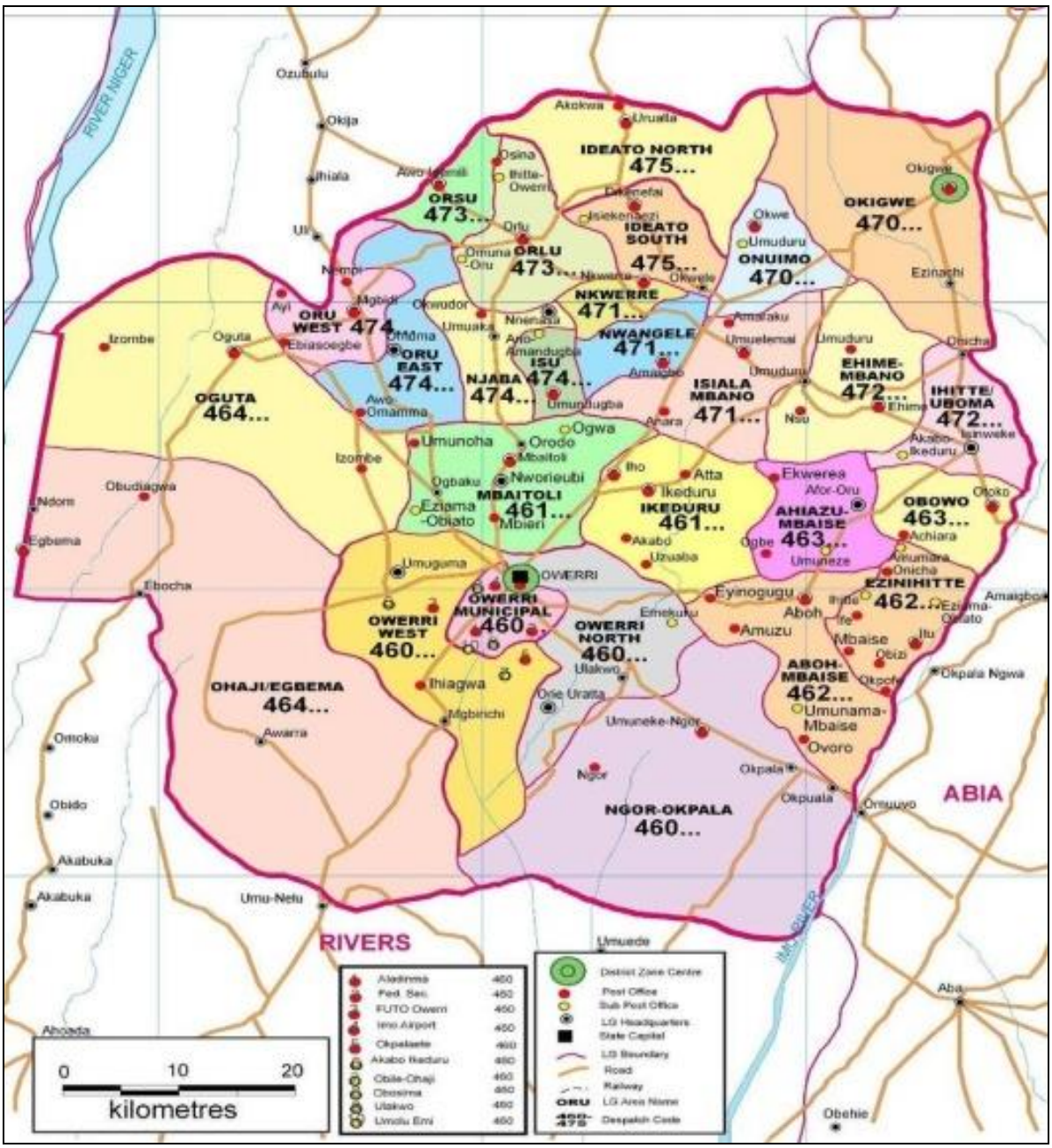
e = 0.05, Therefore

n = 70,895÷ (1+70,895(0.05×0.05)

=399.99

Data Analysis Method

Data analysis was performed using IBM-SPSS statistics version 23 (SPSS Inc. Chicago, USA) for data analyses. Microsoft Excel 2010 was used in drawing charts. Descriptive statistics was used to summarize the data. The frequencies distribution of the variable characteristics were computed by case and control and presented in a table of distribution which were all expressed as the percentage of the distribution. Measured variables were summarized with mean and standard deviation Graphical representations such as bar chart bar was used to represent some of the results.



Source: Owerri Capital Development Authority, 2019

Fig 1: Map of Imo State

Results and Discussion

Distribution of Respondents Based on Knowledge of Colorectal Cancer

In order to measure knowledge of the subject, we analysed the responses of participants by LGAs. Knowledge of colorectal cancer was gotten from participants response to question NO A total of 400 subjects were available. The distribution for knowledge of the subjects is presented in Tables and figures. Table 11 shows overall local government that contained the highest number of study participants with zero knowledge on colorectal cancer Okigwe 50(100%), Obowo 50(100%) and Ikeduru 50 (100%). This closely followed by Owerri West having the highest number of the knowledge on colorectal cancer with Yes 23(46%) and No 27(54%) leaving other local governments like Oguta with a total number of respondents saying Yes 13(26%) and NO 37(74%), Owerri Municipal having Yes 3(6.05) and No 47(94%). the remaining local government been OhajiEgbemma had a parallel number of NO respondents while Oru East has Yes 3(6%) and NO 47(94%).

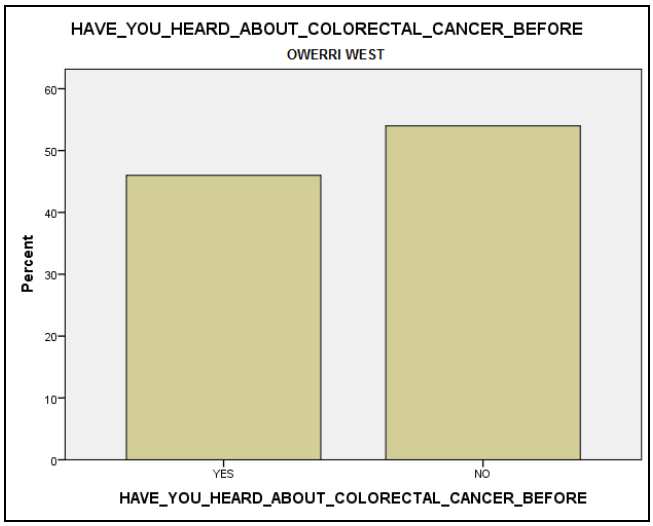


Fig 2: Owerri West

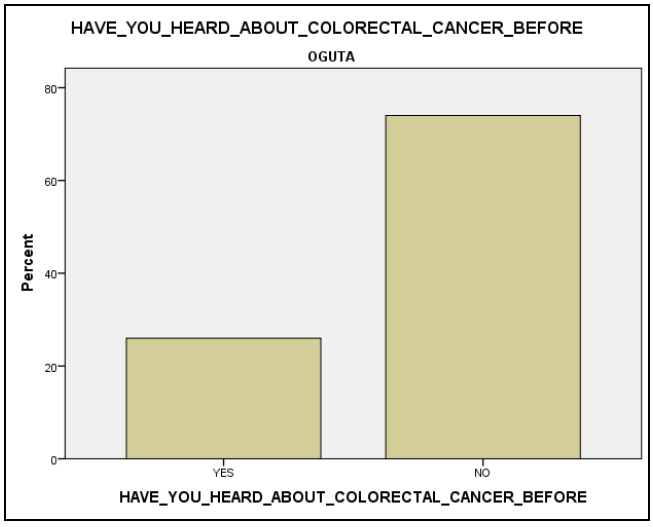


Fig 3: Oguta

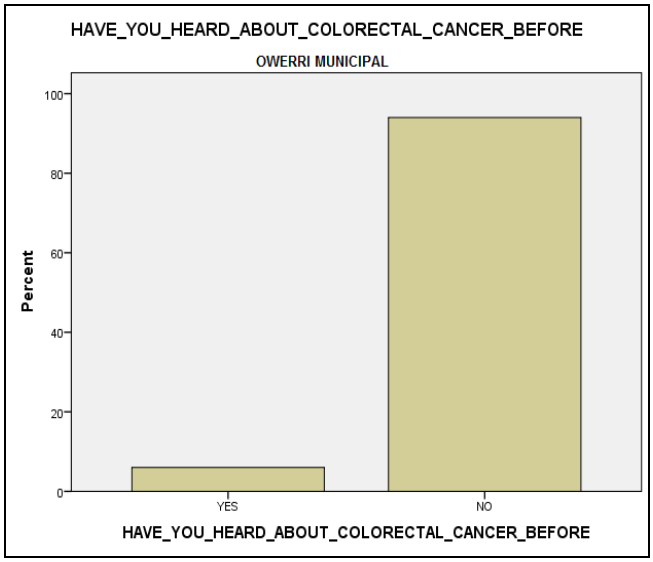


Fig 4: Owerri Municipal

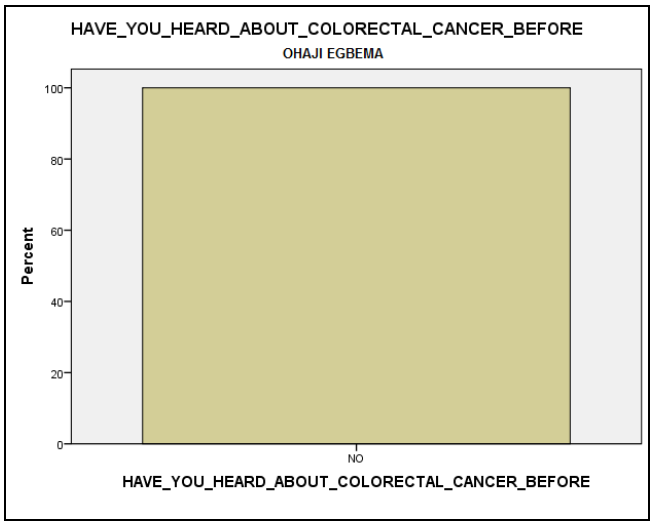


Fig 5: OhajiEgbema

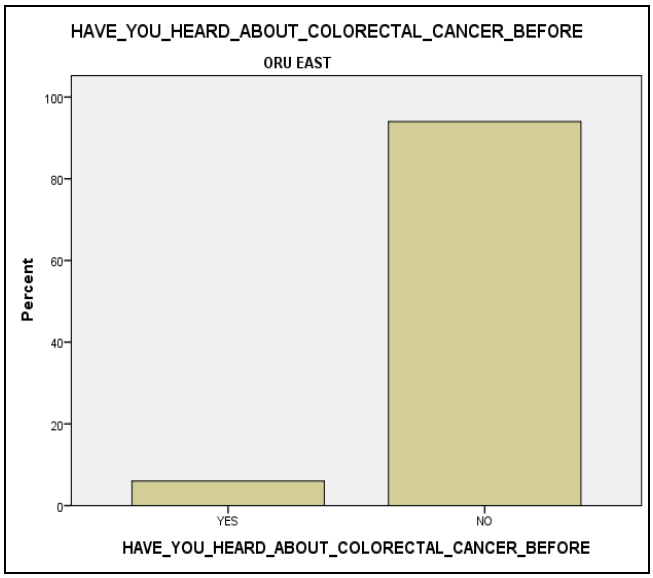


Fig 6: Oru East

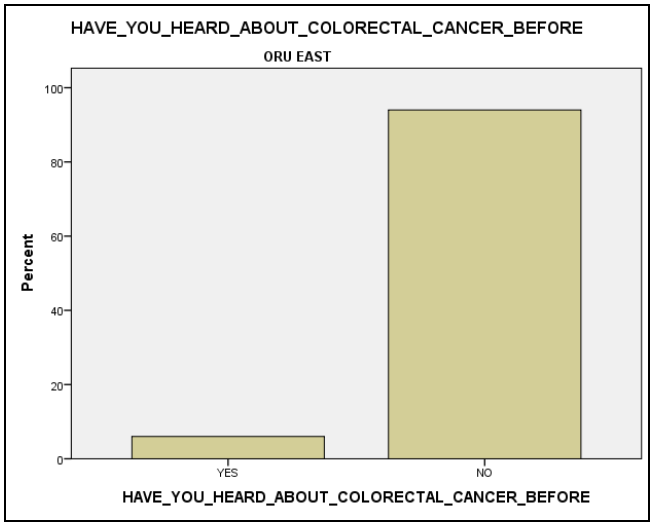


Fig 7: Okigwe

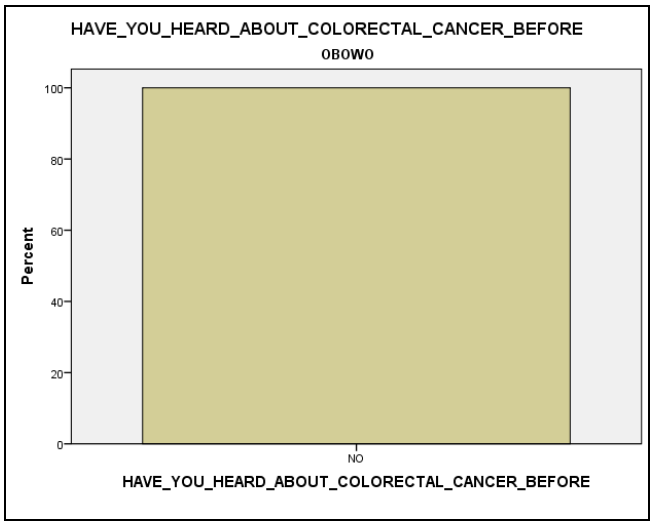


Fig 8: Obowo

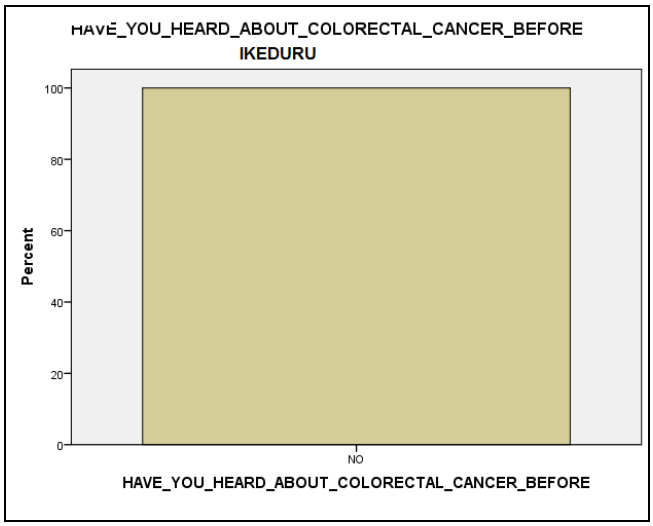


Fig 9: Ikeduru

Discussion

Secondary education was a significant factor in the adjusted analysis with subjects that attained secondary education having reduced risk of colorectal cancer when compared to participants with non-formal education. The possible explanation is that higher educations may influence the higher awareness, higher opportunity for prevention and control. Higher educational status may influence the lifestyle factors (Chaturvedi, 1996). Education has been found to be a positive factor in disease prevention, because being educated exposes one to learning basic skills in addition to knowledge of disease prevention (Manli*et al*, 2018).

Conclusion

Lifestyle factors such as active physical exercise, moderate/avoiding alcohol consumption and avoiding cigarette smoking are cardinal for the prevention of colorectal cancer among the adults. The present study indicate that having family history of colorectal cancer is accompanied with more risk of cancer Comorbidity. Significant relationship was obtained between the colorectal cancer and demographic factors.

Ethical consideration

Ethical issues (including plagiarism, data fabrication, double publication) have been completely observed by the authtors

Competing Interest

The authors declare that they have no competing interest

Consent for publication

Not applicable

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