# Influence of Socio-Economic Status on Attitude towards Medical Check-Up among Residents of Makurdi Metropolis

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#### Abstract

This study examined the influence of socio-economic status on attitude towards medical checkup among residents of Makurdi metropolis. The study employed a cross-sectional survey method and 3x3 factorial designs. The respondents were in the age range of 18-79years with a mean age of 43.9 years. A total of 394 respondents participated in the study. Data were collected using Attitude toward Medical Checkup Questionnaire (ATMCQ). Three hypotheses were tested using Two-Way ANOVA. Results showed that people with high levels of education have favourable attitude towards medical check-up than those with low levels of education. Those with high income were better disposed to availing themselves for medical checkup. The third finding implied that having a high level of education as well as a high income does not guarantee presenting for medical check-up. Based on these findings, it was recommended that government and Non-Governmental Organizations should devise ways of encouraging especially the rural populace to send their children\wards to school, since being educated largely influences presenting for medical check-up. Also, government should make counselling and testing especially for terminal ailments which are quite costly, such as cancer, HIV/ AIDs, etc. free of charge to assist poor citizens present for medical check-up

Keywords: Socio-economic status, Attitude, Medical check-up, Makurdi metropolis

# Introduction

Being in soundness of health is a quality that is desired, yearned for by every human being no matter the background and circumstance, and it is the reason why periodic medical check-up/ screening is highly recommended. Medical check-up goes a long way in determining the longevity of the human race. World Bank, (2018) in Onwube, Chukwu, Ahamba, Emenekwe, & Enyoghasim, (2021) found that the life expectancy in Nigeria rose from 45.33 years in 1980 to 53.95 years in 2017, although this is low compared to the average life expectancy of 61.2 years in Sub-Saharan Africa, however, it reflects a paradigm shift from curative medicine to preventive medical practice.

Periodic medical check-up or routine medical check-up is a form of preventive medicine involving thorough history, physical examination and screening of asymptomatic persons by physicians on a regular basis as part of a routine health care process (World Health Organization, 2010). Periodic medical check-up is considered effective in preventing illness and promoting health and reducing morbidity and mortality (Damiani, Federico & Basso, 2012; Girosi & King, 2007 in Miladinov, 2020). It is also advocated that health check-up should start even while the

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baby is in the womb to find out congenital disease(s) and at the time of birth to identify and correct any threatening disease. Health should be monitored during childhood and adolescence.

Attaining optimal health is one of the sustainable development goals (SDG) any country would desire, for this, life expectancy is a key variable to such attainment and is associated with health of individuals (Lawal, Osinusi & Bisiriyu, 2021). For clarity of understanding of the concept of health, the World Health Organization (1946), defined health as the state of physical, mental and social well-being, not merely the absence of disease or infirmity, while Mosby's Medical Nursing and Allied Health Dictionary, (1990) alludes that, health check-up should start even while the baby is in the womb to find out congenital diseases, and at the time of birth to identify and correct many disease conditions. Health should be monitored during childhood and adolescence. So, regular checkups save lives even when there is no specific problem, since the absence of disagreeable symptoms does not necessarily guarantee that one is in good health. The main goal of a periodic medical examination is to diagnose treatable asymptomatic diseases (Chiou & Chang, 2002; Ringash, 2001). These scholars also found decreased rates of invasive cancers and decreased mortality in people who undergo regular medical checkups. These people simply demonstrate positive attitudes towards medical check-up.

Several factors actually determine people's attitude towards medical check-up. Education is one of those factors, it has been contemplated whether or not individual's education has a positive impact on attitude towards medical checkup. According to Elo (1992); Rezvanifar, Shalbafan, Salehian, & Rasoulian, (2022), effect of education on attitude towards medical check cannot be over emphasized, however, it was maintained that education is the most consistent and important determinant of preventive health services. Several other studies also found a strong positive impact of education on attitude towards periodic medical checkup for mental health services, HIV/AIDS, cancer, self-care education (Costello, Angold, Burns, Stangl, Tweed, Erkanli, & Worthman 1996; Frederickson, 2004; in Simbar, Nazarpour, KhodaKarami, Nasiri, RashidiFakari, Kiani, & Alavi 2023).

It is argued that better educated individuals are more aware of health problems, know more about the availability of health care services, and use this information more effectively to maintain or achieve good health status. Education may also act as a proxy variable for a number of background variables representing individual's higher socioeconomic status, thus enabling him/her to seek proper medical care whenever he/she perceives it necessary (Terwase, Asuzu & Mtsor 2014).

During routine or periodic medical checkup some of the diseases such as HIV/AIDS, breast cancer, cervical cancer, prostate cancer and diabetes mellitus and many others, which can be detected and any deviation from good health is noticed and managed in the form of preventive or curative services thereby reducing the mortality associated with them Moser, Patnick & Beral, (2009). It is essential to have periodic medical examination since these chronic diseases have a heavy socioeconomic burden on individuals and account for more than 60% of the overall global burden of diseases (Siqing, 2009). Thorough medical/physical examination is necessary and its frequency increases if there is a health problem that requires continuing care.

Several theories have tried to explain why people may or may not engage in attitude change even for perceived benefit. One of such theories is the theory of attitude-change developed from the propaganda theories in the late 1930's during World War II (Baran & Davis, 2012). It theorizes that there are pre-existing attitudes, whether biological or psychological which have to be changed if selected messages must have any effect on the target audience. Again, it explains that these pre-existing attitudes are in-depth and, therefore, stand as barriers to effective penetration of messages for desired change.

This theory therefore, explains three bases for attitude change, which include compliance, identification, and internalization. These three processes demonstrate the different levels of attitude change (Wood, 2000). Compliance refers to a change in behaviour based on consequences such either gaining a reward or punishment. Identification explains one's change of beliefs and actions in order to be similar to the one he admires. In this case, the individual changes not because of what he intends to get from the attitude but because it is associated

with an admired one. This seems like reinforcement theory where significant others have an influence in people's behaviour.

Internalization refers to adoption of an attitude due to the content of the perceived attitude. At this level of attitude change, the individual's evaluation towards a perceived attitude change when he finds the content of the attitude to be intrinsically rewarding. The new attitude or behaviour is consistent with the individual's value system, and tends to be merged with the individual's existing values and beliefs. Therefore, behaviour towards some object is a function of an individual's intent, which is a function of one's overall attitude towards the action. The Expectancy-value theory is based on internalization of attitude change (Wood, 2000).

This study therefore aims at assessing the influence of socio-economic status on attitude towards medical check-up among residents of Makurdi Metropolis. Specifically, the study seeks to:

- **i.** Determine the extent to which level of education influence their attitude towards medical checkup among residents of Makurdi Metropolis.
- **ii.** Investigate the extent to which income influence attitude towards medical checkup among residents of Makurdi Metropolis.
- **iii.** Investigate the extent to which income and education jointly influence attitude towards medical checkup among residents of Makurdi Metropolis.

# Method

### Design

This study adopted a cross sectional survey. The study variables of education (no formal education/primary, secondary and tertiary) and income (High, average and low) are independent variables and attitude towards medical checkup as the dependent variable.

# Sampling

The study applied cluster, simple random sampling and convenient sampling methods to select sub-study areas and respondents. The study area was clustered into INEC wards which include: Agan, Walamayo, Fiidi, Modern Market ward and Ankpa. Others are High Level, Wurukum, North Bank, North Bank II and North Bank III. After this stage simple random sampling was used to allow each ward equal chance of being selected. This was achieved by using ballot papers bearing names of the various wards, then five of the ballot papers were chosen at random and wards whose names were picked were visited to get the respondents. On getting to the selected wards, residents and participants were conveniently selected from various households.

# Sample Size Determination

As of 2007, Makurdi had an estimated population of 500,797 (National Population Commission, (2006); in Adeke, Gbagir, & Tyogo, (2021). Taro Yamane Formula was used to determine sample size for this study which arrived at a sample size of 400.

# Participants

The study consisted of 394 respondents drawn from the population of Makurdi residents. They were in the age range of 18-79 years with a mean age of 43.5 years. The demographics indicate that 71 (18.0%), 212 (53.8%), 111 (28.2%) had no formal education, primary/post primary education and tertiary education respectively. The distribution of respondents according to marital status showed that 193 (49.0%) of the respondents were married, 179 (45.4%) were single and 22 (5.6%) of the respondents lost their partners through divorce and death at the time of carrying out this research. The distribution of respondents according to ethnic groups showed 221 (56.1%) were Tiv, 68 (17.3%) were Idoma, 71 (18.0%) from Igede tribe and 32 (8.1%) respondents were drawn from other tribes without specifications. The income distribution of the respondents indicated that 125 (31.7%) were high income earners, 157 (38.9%) were average income earners and 112 (28.4%) were low-income earners. Incidental findings reported

that 151 (38.3%) and 71 (18.0%) had ever undergone check-up for HIV/AIDS and cancer respectively. However, 171 (43.4%) reported not ever tested for any of the two diseases.

### Instruments

Data for this study were collected using Attitude toward Medical Checkup Questionnaire (ATMCQ). Attitude toward Medical Checkup Questionnaire (ATMCQ) is a 13-item selfdeveloped instrument designed to measure attitude towards medical checkup among the general population. It is scored on a 6-point Likert scale response of Strongly Agree = 5, Agree = 4, Moderately Agree = 3, Disagree = 2, moderately Disagree=1 & Strongly Disagree = 0.

A pilot study was done to ensure the reliability and validity of the newly developed scale, it was subjected to pilot study using residents of Otukpo Town in Benue State. A total number of 120 copies of the instrument were administered to the participants using convenient sampling in which each resident was contacted at home. Out of this number distributed, only 100 copies were returned representing a return rate of 83.3%. 20 copies constituting 16.6% were not properly completed and they were subsequently discarded. Results indicated that the item total correlation of the 13 items for the instrumentwere.27 to .67. The output of the result yielded a Cronbach's alpha of .78 and total variance explained of 64.568 which means the test items were validly measured at 64.6% of the study variable.

### Procedure

First, the informed consent of residents from the various households was sought and granted, after which 400 questionnaires were administered to the respondents. After 30 minutes the questionnaires were collected. Out of the 400 questionnaires administered only 394 were correctly filled, 6 were invalid accounting for a response rate 98.5%. The respondents exhibited high level of enthusiasm in participating in the study. Finally, the researcher explained the essence of the study to them in accordance with research ethics in psychology.

# Data Analysis

Data for this study were analyzed using Two-Way Analysis of Variance to test for the main and interactive effect of education and income on attitude towards medical checkup among residents. Also, descriptive statistics and simple percentages were used for analysis of demographic data.

#### Results

This study investigated education, income and attitude towards medical checkup among residents of Makurdi metropolis. In this regard, data were collected and tested and this chapter presents results derived from data analysis according to the stated hypotheses.

# **Hypothesis Testing**

The mean scores of the groups of participants on attitude towards medical checkups are shown in Table 1, while Two-Way ANOVA summary table is presented in Table 2

Variables	Levels	Mean	SD	Ν
Education	No Formal Educ.	14.70	5.16	71
	Prim/post prim.	17.20	6.50	212
	Tertiary	22.31	8.11	111
Income	High	19.79	7.97	125
	Average	18.59	7.63	157
	Low	15.86	5.27	112

Table 1: Showing Mean Scores (M) and Standard Deviation (SD) of Groups among Makurdi residents on attitude towards medical checkup

The results presented in Table 1 revealed that educated people residing in Makurdi with tertiary qualification scored higher on attitude towards medical checkup (M = 22.31, SD = 8.11) than their primary/post primary (M = 17.20; SD = 6.50) and uneducated counterparts (M = 14.70, SD = 5.16). The results further showed that individuals with high income scored higher on attitude towards medical checkup (M = 19.79, SD = 7.97) than those with average (M = 18.59, SD = 7.63) and low income (M = 15.86, SD = 5.27). Tests of significance of the means are reported in table 2 below.

Source	Type III Sum of Squares	df	Mean Square	F	Sig.		
Corrected Model	3807.312ª	8	475.914	10.663	.000		
Intercept	89892.682	1	89892.682	2014.003	.000		
Educational	2266.975	2	1133.487	25.395	.000		
Income	332.847	2	166.423	3.729	.025		
Educational * Income	171.198	4	42.799	.959	.430		
Error	17184.028	385	44.634				
Total	151398.000	394					
Corrected Total	20991.340	393					
a. R Squared = .181 (Adjusted R Squared = .164)							

Table 2: Two-ANOVA summary table showing the main and interactive effects of education and income on attitude towards medical checkups among residents of Makurdi Metropolis

Results in Table 2 shows that there was a significant difference among residents with tertiary, primary/post primary and those with no formal education on attitude towards medical checkups (F(2, 385) = 25.395, p < .05). This implies that educational attainment is one of the factors that determines attitude towards medical checkups among people. Therefore, this hypothesis has been accepted and the null hypothesis rejected.

Also, the results indicated that there was a significant income difference in attitude towards medical checkups (F(2, 385) = 3.729, p < .05). This means that people with high income go for medical checkup more often than average and low-income earners. This implies that income is the likely determinant of attitude towards medical checkups among residents of Makurdi metropolis. Therefore, hypothesis II has been confirmed and the null hypothesis rejected.

Finally, the results showed that there was no significant interactive effect of education and level of income on attitude towards medical checkups (F (4, 385) = .959, p>.05). This means that interplay of education and income is less likely to influence attitude towards medical checkup among residents of Makurdi metropolis. This further implies that education and income are not co-determinant of attitude towards medical checkups.

#### Discussion

In hypothesis one, it was found that there was a significant influence of education on attitude towards medical checkups among respondents. This means that educated residents are more likely to go for medical checkups than their uneducated counterparts. This finding is in line with Uchenna, Ambakederemo and Jesuorobo (2012) who investigated the incidence of medical checkup for heart disease in which two hundred and thirty-six patients attending a medical outpatient clinic in southern Nigeria and results revealed a significant difference between level of education of respondents and attitude towards awareness of heart disease prevention.

This finding also supports the research finding of Amu, Ijadunola and Odu (2013) which revealed that respondents with tertiary education were more likely to access VCT. Amu et al (2013) maintained that continuous media education, social marketing of VCT, building more testing sites in rural areas and scaling-up of the services in routine medical and obstetric care, can help to improve the uptake of medical check-up. Furthermore, this finding is in tandem with Oguoma, et al, (2015) finding which indicated that participants with university and postgraduate education had higher access to blood pressure and blood glucose screening

compared to other educational groups; and this showed a statistical significance.

Hypothesis two found a significant income difference in respondent's attitude towards medical check-up, and it is obvious from the results that people with high income tend to exhibit positive attitude towards medical checkup. This is because most medical check-ups are not done for free. Even if the cost of testing is free, the individual must spend on means of transportation. This finding is in line with Ezeokana, Nnedum and Madu (2009) research finding which indicated that, poverty is a prevalent issue among people living with HIV/AIDS in Nigeria.

These authors therefore suggested that reducing poverty is a viable pre-requisite in both stemming the epidemic and providing adequate care and support to those affected with HIV/AIDS. This finding supports Oguegbu's (2016) finding which indicated that the socio-demographic variables of gender, place of residence, level of education, geopolitical zone, and SES were significantly associated with HCT uptake. Oguegbu submitted that examining the efficacy of HCT treatments in Nigeria, along with conducting a demographic analysis of the atrisk population, could be beneficial in informing the authorities who are responsible for allocating finite medical resources.

Finally, the results derived from test of hypothesis three showed that there was no significant interactive effect of education and level of income on attitude towards medical checkups. This means that the interplay of education and income does not influence attitude towards medical checkup among residents of Makurdi. This further implies that education and level of income are not co-determinants of attitude towards medical checkups. This finding contradicts results by Le´pine, Terris-Prestholt and Vickerman (2015) indicate that education, wealth, stigma, HIV knowledge and perceived risk are joint predictors of HIV testing among both partners while routine provider-initiated testing appears to be very effective to increase HIV testing among women.

#### Conclusion

- i. There was a significant difference among residents with no formal education, primary/ post-primary and tertiary education on attitude towards medical checkup in Makurdi metropolis.
- **ii.** There was a significant income difference in attitude towards medical checkups among residents of Makurdi metropolis
- **iii.** There was no significant joint influence of educational attainment and level of income on attitude towards medical checkups among residents of Makurdi metropolis.

#### Recommendations

Based on findings of this study, it was recommended as follows:

- i. Government and Non-Governmental Organizations should devise ways of encouraging especially the rural populace to send their children/wards to school to acquire education, since being educated largely influences presenting for medical checkup.
- **ii.** Clinical psychologists should pay much attention to individuals' educational background as well as income level at the counseling, testing and treatment centers in both urban and rural areas to encourage positive medical check-up attitude among people.
- iii. Government should make counseling and testing especially for ailments such as HIV/ AIDS and cancer free of charge to help poor citizens to present for medical check-up.

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