Integrata Ginecologia e Obstetricia (IGO)

HENDUN RESEARCH ACCESS

Research Article

Assessing the Prevalence Rate of Overweight and Obesity with the Use of Body Mass Index in Some Areas of Ghana: Basis of Lifestyle Medicine Intervention

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Abstract

Background: Overweight and obesity are cherished in most parts of Africa, it is seemingly considered as a sign of good living to most of the people without counting its health hazards, yet, there are scarcity of data on the prevalence or factors facilitating the risk of high Body Mass Index (BMI) in some parts of Brong-Ahafo Region, of Ghana. This study was conducted from six traditional areas to ascertain whether the residence are at high risk of overweight and obesity to encourage researchers to figure out specific Lifestyle Medicinal intervention models to mediate the problem.

Data gathering method: This data was obtained from the Department of Preventive Healthcare and Lifestyle Medicine at Valley View University, Techiman Campus. The BMI of 500 respondents were obtained, both were males and females between 18 and 59 years old. The respondents were from Techiman, Nkoranza, Atebubu, Kwamedanso, Yeji and Kajiji traditional areas. BMI calculator was used for the assessment.

Study design: The study is basically cross sessional.

Delimitations: This paper is to assess the prevalence of overweight and obesity in order to introduce lifestyle medicinal measures to prevent, arrest and reverse overweight and obesity. It is limited to its causes among the respondents. Also, the respondents were not based on random sampling. The data for this research was obtained from community healthy health screening conducted by the University hospital, those who were willing were all included in the study.

Results: High BMI was detected among the respondents. 235 (47%) of the sample respondents had normal BMI of 18.5- ≤24.9 while 265 (53%) had BMI of ≥25 to≥30 representing overweight and obesity.

Observations: Observably, the leader of the team for the community healthy health screening from the University hospital established that significant proportion of the respondents with the high rate of BMI reported presence of arthritis, diabetes, heart diseases, gynecological conditions such as menstrual irregularities and other hormonal imbalances, problems with the eye sight, and sexual weakness respectively.

Conclusion: Policies to control and prevent overweight and obesity should be taken into account respectively. Overweight and obesity is gaining deeper grounds in the selected areas for this study. Without standard and proven Lifestyle Medicinal intervention models, complications due to overweight and obesity may seriously affect both individual and the national economic indicators in the context of health.

Keywords: *Prevalence, Overweight, Obesity, Morbidity, Mortality, Body Mass Index.*

Introduction

One of the main public health hazards calling for global urgent attention with intervention models is the high rate of overweight and obesity gaining grounds in the developing countries. This study was to assess the prevalence of overweight and obesity rate among the people of Techiman and Noranza, Kwamedanso, Atebutbu, Yeji, and Kajiji traditional areas. The aim is to find out whether there is a high prevalence of overweight and obesity in other to come out with suggested intervention models aiming at polices focusing on behavioral changes such as physical activities, dietary, and other healthy lifestyle choices.

Review of Related Literature

overweight and obesity in the continent of Africa is mounting very high (Adeboye, Giovanna Bermano, & Rolland, 2012). Overweight and obesity has become one of the key and most transparently observable but neglected as a major public health problems (WHO, 2003) facing several countries in Africa which Ghana is not out of the list. Medical costs associated with obesity increased from $78.5 billion yearly in 1998 to $147 billion annually within ten years (1998 to 2008) respectively [1]. In Ghana, urban and rural areas in Accra, showed overall crude prevalence of overweight and obesity as 23.4 and 14.1% in adults who were 25 years and above. The rate was higher in females than the males respectively [2]. This paper is limited to the specific causes of overweight and obesity this can be obtained from scientific review articles and textbooks [3].

In the year 2014, it was estimated that the obesity skyrocketed to 641 million as against 105 million in 1975 constituting 6.1% escalation in the past 43 years [4]. Overweight and obesity has become a global challenged both in the developed and the developing countries

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Received: October 07, 2018; **Accepted:** November 01, 2018; **Published:** November 05, 2018

affecting half a billion people [1]. The simplest method of measuring overweight and obesity in a form of BMI is relatively cheaper to be assessed by several billions of people globally, even in the very low income countries. To reduce the prevalence of overweigh and obesity, the **Behavioral Risk Factor Surveillance System**; a state-based cross-sectional random telephone survey of the US population for those who are ≥18 years [5] proved positive to detect overweight and obesity at the early stage of life with affordable cost.

BMI is defined as weight in kilograms divided by the height in meters squared (kg/m^2). It has been defined by WHO and the National Institutes of health (NIH) that overweight is established when the BMI is between <25.0 and 29.9 kg/m^2; and obesity BMI >30.0 kg/m^2 [5]. Multi factors have been figured out as causative factors contributing to overweight and obesity but most studies connect imbalance in the amounts of calories consumed and those expended [6] to the right BMI.

Considering the past and current BMI trends, it is expected that obesity will rise to take a significant scaling, as detected with swiftness [1]. It is apparent that high body weight is associated with an increase in the risks for coronary heart disease, poorer mental health, reduction of optimum health, type 2 diabetes, cancers such as endometrial, breast and colon, hypertension, dyslipidemia, stroke, sleep apnea, respiratory problems, osteoarthritis, and gynecological problems such as menstrual irregularities and infertility, and morbidity [1,7]. Obesity must be seen as a complex health issue. It resulted from combination of several factors, such as behavior; dietary, physical inactivity, use of medications, and other exposures. Supplementary factors leading to the problem of obesity today are not limited to the food and physical activity environment, knowledge on the required skills, food marketing and promotion [7].

Method

The researchers went to the respondents' localities with announcements in their churches, radio, and on telephones were used to invite the interested respondents to participate in the study. The BMI of 500 respondents were assessed, both married and unmarried ranging between 18 and 59 years old. The respondents were all healthy from the general population from five catchment areas who were predominantly farmers and traders in Techiman traditional area and Nkoranza all in the Brong Ahafo Region, Ghana respectively. The instrument used to check the body weight was BMI calculator.

Study design

The study is basically cross sessional. At each site where the data were gathered, an hours between six and eight were spent.

Method

The Data were gathered within three months ending in July 2017 from six communities. It was obtained from the department of Preventive Healthcare and Lifestyle Medicine at Valley View University, Techiman Campus.

Limitations

This paper is to assess the prevalence rate of overweight and obesity. It is limited to its causes. Other researchers could investigate in to that as well, however, the possible specific causes of overweight and obesity can be obtained from various sources such as peer review scientific journals, textbooks qualitative research and observations studies. Other limitations were that, the respondents were not based on random sampling, the data was obtained from community health screening therefore those who were willing were included in the study.

Results and Discussions

Accra, the capital of Ghana is known for overweight and obesity [2], but this study result has proven otherwise, overweight and obesity is in the sky high even in some farming communities or beyond the capital of Ghana. The possibility could suggest that the trend of food consumption in Ghana is almost the same throughout the country; refined foods such as polish rice, fast foods, and less intake of fruits and vegetables, have become part of the major staple foods and the practice of the dietary behavior for the people.

Using the World Health Organization international classification cutoff point of MBI [8], the high BMI rate in the catchment areas of the respondents was highly alarming. The study results show that there was a high BMI among the respondents. It was shown that 235 (47%) of the sample respondents had normal BMI of 18.5- ≤24.9 while 265 (53%) had BMI of ≥25 to≥30 representing obesity. The graph below give graphical presentation of the BMI of the respondents: Figure 1

Apparently, using BMI to measure body fat does not take into accounts of age, sex, bone structure, fat distribution or muscle mass making BMI a high tendency to misrepresent its quality [9,10]. Although, BMI may not be parallel to the same gradation of fatness in all populations, notwithstanding, the health risks associated with increasing BMI are continuous and may differ among different subgroups [8]. It is because random sampling was not conducted, this result may not be generalized for the entire population, and notwithstanding it is a sign indicating that the general health of the population is at risk in the context of chronic diseases.

Observations

Overweight and obesity can be justified as the parent of most of the chronic diseases. Observably, the leader of the team for the community healthy health screening from the University hospital established in an interview with her that, significant proportion of the respondents who came for the screening and with the high rate of BMI reported health conditions associated with arthritis, diabetes, heart diseases/enlargement after further investigation with the ECG. Again, gynecological conditions such as menstrual irregularities and other hormonal imbalances, problems with the eye sight, and sexual weakness respectively among the males were observed.

Conclusion

High BMI indicating overweight and obesity was detected among the respondents. Standard policies to control and prevent overweight and obesity should be taken into account respectively. Overweight and obesity is gaining deeper grounds in some places in Ghana indicating poor health outcome. Without implementing standard polices to reduce the prevalence, cardiovascular diseases, type 2 diabetes, high lipedeamea, cancers, gynecological conditions and other chronic diseases with it associated high mortality would be rampant in these areas within the next few decades which would result to high medical cost aside its mortalities.

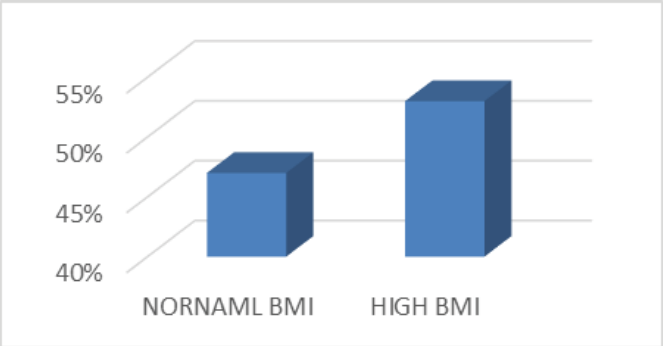

Figure 1

Recommendations

It is highly recommended that, programs, policies, education and awareness should be created on the rise and prevention of overweight and obesity in all the communities in the Northern part of Brong-Ahafo Region. Resource from the health Directorate in the Municipalities and he Districts of Techiman, Nkoranza, Kwamedanso, Atebubu, Yeji, Kajiji must be channeled into the prevention and control of overweight and obesity. Similar study could be conducted using random sampling method. Specific intervention models should be sought for prevention of overweight and obesity. Finally, other researchers can conduct qualitative research to find out why there was a very high prevalence of BMI among the sampled population.

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