Trends of Obesity Epidemic and its Socio-cultural Dimensions in Africa: Implications for Health Systems and Environmental Interventions

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Abstract

Obesity is now commonly seen in developing countries, which are characterized by weak health systems to address the challenges brought about by obesity and its consequences. Obesity and overweight are the fifth leading risk for global deaths. At least 2.8 million adults die each year as a result of being obese or overweight. In most African countries, social and cultural perceptions of obesity are common as it is seen as a symbol of wealth, autonomy, attractiveness, happiness, beauty and success. In addition, some attributed ‘thinness’ to an underlying health problem such as HIV and AIDS. These misconceptions about obesity could result in a shift in dietary intakes and activity patterns to that of high fat intakes with lower physical activity. It is also known that environmental factors exert a major influence on dietary behavior and physical activity among Africans. Multi-level, multi-sectoral and context-appropriate health and environmental interventions are suggested to halt obesity epidemic in Africa.

1 Background

Obesity epidemic is a worldwide phenomenon and not just a health problem of developed countries. Obesity is defined as abnormal or extensive fat accumulation that negatively affects health. According to the World Health Organization, overweight and obesity are defined as Body Mass Index (BMI) $\geq 25$ kg/m$^2$ and $\geq 30$ kg/m$^2$ respectively while central obesity occurs when the waist circumference is greater than 102 cm in men and 88 cm in women (WHO, 2000 & 2012). Obesity involves both increased fat cell size and number, and occurs when energy intake is greater than energy expenditure (Fomiguera & Canton, 2004). This energy input and energy output can be affected by many factors including the quality and quantity of dietary intake, environmental and genetic inputs, and physiological and psychological status (Ali & Crowther, 2009).

Originally a disease of the affluent societies, obesity is now commonly seen in developing countries which are characterized by weak health systems to address the challenges brought about by obesity and its consequences (Popkin et al., 2012). In 2010, more than 40 million children under five years were overweight or obese - 35 million in the developing countries and 8 million in the developed countries (de Onis et al., 2010; WHO, 2012). Occurrence of obesity among children has continued to increase in low and middle income countries, particularly in the urban settings. Consequently, many of these countries are now facing a “double burden of disease” (Doak et al., 2005). This is so because as these countries continue to battle with infectious diseases and undernutrition, they are simultaneously experiencing a rapid upsurge in non-communicable diseases resulting from obesity.
Emerging Issues in Medical Diagnosis and Treatment

Obesity and overweight are the fifth leading risk factor for global deaths. At least 2.8 million adults die each year as a result of being obese or overweight (WHO, 2012). The World Health Organization (2008) estimated that 35 million deaths each year i.e. 60% of all deaths globally, with 80% in low and middle income countries, are caused by non-communicable diseases. Cardiovascular diseases, cancer, diabetes and chronic respiratory diseases combined constitute a leading threat to human health and development; they are termed “silent” pandemic as they are the world’s biggest killers of non-communicable diseases, which are been driven by demographic changes and dietary shifts. This non-communicable disease pandemonium has been linked to the rise in obesity (World Economic Forum, 2010). In sub-Saharan African countries, the prevalence of obesity has become a leading risk factor for cardiovascular diseases (CVD) and diabetes especially in urban areas of Africa with predictions of this increase in the growth health trend surpassing beyond 2030 (WHO, 2008).

Several case studies using small and focused samples have elucidated the complications of obesity and associated chronic health problems such as cardiovascular diseases in adults (Popkin & Doak, 2009). In 2005, an estimated 17.5 million people died of cardiovascular diseases representing 30% of all global deaths; out of these, 80% were from low- and middle-income countries (WHO, 2007). In South Africa, cardiovascular diseases constitute the second leading cause of death after HIV accounting for up to 40% of deaths among adults (Peer, 2008). Studies have also indicated that mortality from cardiovascular diseases in developing countries is expected to increase by 120% for women and 137% for men by 2020 (Yach et al., 2004). Furthermore, predictions in the next two decades are suggestive of a near tripling of ischemic heart disease and stroke mortality in Latin America, the Middle East and sub-Saharan Africa (Yach et al., 2004). The findings of Oghagbon et al. (2008) showed that an increased occurrence of hypertension is associated with increasing BMI. Likewise, in a reviewed literature on global burden of chronic kidney diseases (CKDs), obesity was found to be one of the factors contributing to the prevalence of CKDs. In addition, recent epidemic of childhood obesity has raised concerns because of its clinical and public health consequences. Obesity is seen to be replacing traditional public health concerns such as under-nutrition and infectious diseases as one of the major contributors to ill health (WHO, 2012).

The global obesity pandemic varies greatly among women and men within and between countries. Obesity is a predominant health risk factor for women compared to men. Gender disparities in overweight and obesity are exacerbated among women in developing countries particularly in Middle East and North Africa. Obesity among women obesity is significantly higher than among men with the exception of high income countries where more men are overweight than women. However, the prevalence of obesity varies across socioeconomic groups (Kanter & Cabellero, 2012). In low and lower-middle income countries, obesity among women is approximately double that among men. An estimated 205 million men and 297 million women over the age of 20 were obese in 2008 i.e. a total of more than half a billion adults worldwide (Finucane et al., 2011).

Our environment has witnessed a large increase in the proportion of obese children and adults with the comprehension of underlying key role behaviors. Data on obesity in Africa are limited and due to slow development, most African countries are lagging behind the countries in other regions in terms of both the demographic and nutritional transitions. Together, these transitions create enormous public health challenges, and failure to address the problem may impose significant burden for the health sector and the economy of sub-Saharan African countries (Asfaw, 2005). Shifts in diet and activities are consistent with these changes, but little systematic work has been done to understand all the factors contributing to these high levels. Despite the progress being made towards the prevention and management of obesity, its prevalence continues to increase sharply and the challenges posed to policy makers, public health workers and scientists cannot be underscored.

2 Trends of Obesity Epidemic in Africa
Occurrence of overweight and obesity are increasing in the more developed parts of Africa with a resultant co-existence of under-nutrition and over-nutrition in many African countries. The rise in the prevalence of obesity observed over the past decades is taken by many as an indication of the predominance of environmental factors i.e. the so-called obesogenic environment over genetic factors in explaining why obesity has reached epidemic proportions (Rudkowska & Perusse, 2012). The trend in
the increasing prevalence of obesity and related morbidity and mortality in developing countries has been attributed to rapid urbanization, nutritional transition and reduced physical activity (Oyeyemi et al., 2012).

Throughout most of human history, weight gain and fat storage have been viewed as signs of good health and prosperity. However, as standards of living continue to rise, weight gain and obesity are now posing a growing threat to health in countries all over the world; these are trends related to globalization. More so, it is becoming clear that different ethnic groups have different proportions of fat-to-lean tissues at equivalent BMIs and that the magnitude of the multiple co-morbidities associated with high BMIs may also differ among different ethnic groups for reasons that may reflect the impact of environmental–genetic interaction (York et al., 2004). According to WHO (2012), obesity in the developing world is seen as a disease of the socioeconomic elite. The pandemic is seen as a scourge in poorer countries especially in the urban areas. There is a shift of the burden of obesity towards the groups with the lowest socioeconomic status in parts of the developing world; this phenomenon has important policy implications. First, for many developing countries (most or all upper-middle-income economies and some of the lower-middle-income economies), obesity should be seen at least among women as a relevant booster of the already high health inequities generated by nutritional deficiencies, infectious diseases and maternal and perinatal conditions.

As observed above, in addition to being a disease in its own right, obesity substantially increases the risk of several leading causes of death and disease in the developing world. Large nationwide surveys provide insights of not only body composition patterns but also some of the key underlying shifts in diet and physical activity patterns. Urban Africans have increased their consumption of refined foods and fats. Despite relatively low levels of economic development, dietary shifts have begun to appear. Changes in consumption patterns of products of multinational companies such as cheap highly refined fats, oils and carbohydrates as well as labour-saving mechanized devices, affordable motorized transport and the seductions of sedentary past times such as television viewing has increased the obesity pandemic in developing countries.

Another pertinent issue in the obesity pandemic is the gender variation. It has been observed that women are more overweight and obese than men in the developing countries. However, this is the reverse in the developed nations where men are more obese and overweight than women. According to Kanter & Cabellero (2012), different contextual factors often drive gender differences in food consumption, and women often report consuming healthier foods, yet may consume more sugar-laden foods than men. The nutritional transition taking place in many developing countries has affected excess weight gain among both genders. This variation between genders on obesity is also observed among children and adolescents with a disparity that cuts across different regions in Africa. The obesity or overweight rates among pre-school aged children are 7% in Eastern Africa, 9% in Middle Africa, 8% in Southern Africa and 6% in West Africa. Northern Africa has been reported to have the highest rates with one in six pre-school aged children overweight or obese (Gupta et al., 2012). In 2006, 17% and 11% of South African girls and boys aged 6 to 13 years respectively were overweight or obese (Gupta et al., 2012).

Puoane et al. (2002) studied South Africans who participated in the 1998 Demographic and Health Survey in order to ascertain and determine the anthropometric profile of obesity using Body Mass Index (BMI) as indicator of obesity and Waist/Hip Ratio (W/HR) as indicator of abdominal obesity. He observed that obesity increased with age, level of education, ethnicity and area of residence with higher levels of obesity found in urban African women. Few studies in urban settings have found that obesity rates are rising more quickly among the poor than among the rich (Ziraba et al., 2009).

Data are scarce from many countries in North Africa; however, there is evidence that obesity rates are on the increase (Musaiger, 2011). This trend has been identified as the “New World Syndrome” and it is informed by the discovery of oil and the subsequent increase in wealth (Godwin, 2006). The prevalence among women has tripled over the past 20 years and it is greater among women in urban areas with lower education. A review of some regional studies in different ethnic groups found that rural women are equally affected, as 39–52% and 24–39% of rural women were overweight and obese. In a study of 1,040 black women in the North West Province, it was found that rural women had a lower mean
BMI than urban women; the rural women were reported to ingest less fat, had lower household incomes and higher physical activity than urban women (Kruger et al., 2002).

In South Africa, one of the possible reasons for the rise in prevalence of obesity is the migration of populations from rural to urban areas, which has been shown to be associated with lifestyle changes particularly the increased availability and therefore consumption of calorie dense, fatty food (Pieters & Vorster, 2008). A comparative study on the extent of urbanization and nutritional transition was conducted among 1,726 South African and 1,008 Kenyan women on diet and weight loss using a 24 hour-dietary recall. Alongside data compared from the Demographic and Health Survey (DHS) of women in South Africa (n=4481), findings revealed that 27.4% of South African women had BMI ≥30 kg/m² compared with 14.2% of Kenyan women. In both countries, there were large urban-rural differences in BMI with the highest prevalence found in women living in urban areas. It was also observed that BMI increased with age, as did abdominal obesity which was prolific in both countries with more than 45% of women in the older groups having a waist/hip ratio >0.85. The nutrient mean adequacy ratio (MAR) of the South African rural diet was lower than those of the Kenyan diet (55.9 versus 57.3%). The dietary diversity score (DDS) and food variety score (FVS) were significantly lower in South African rural women (3.3; 4.9) compared with Kenyans (4.5; 6.8). The urban-rural differences in diet and weight status indicated that the nutritional transition was similar in both countries despite large socio-demographic differences (Steyn et al., 2012). In other parts of Africa, especially in rural areas, the prevalence of obesity is still low. For example, in rural Nigeria, only 1.2% of men and 3.2% of women had BMIs ≥25.41 kg/m². Overweight was found to increase with age taking more prominence in adolescence, particularly among girls (Mokhtar et al., 2001). There has been report of variation of obesity among populations of different South African descents. In a study conducted among 554 economically active South African adults, Senekal et al. (2003) observed that more than half of white men studied (56.4%) were overweight or obese. High percentages of black men (49.3%) and black women (74.6%) were overweight or obese, whereas the prevalence was lower among men (45.7%) and women (66%) of mixed ancestry, Asian men (35.5%) and women (37%), and white women (42.2%).

Globalization and urbanization have been documented as factors contributing to the upsurge of obesity epidemic. There has been a shift towards nutritional transition i.e. shift from traditional foods low in fat and rich in fiber to meat and dairy products containing high levels of saturated fats and more highly refined foods. In South Africa, an improvement in household income was positively associated with obesity illustrating that at this stage of the demographic transition, obesity can be expected to have a higher prevalence in the higher socio-economic strata than others. The same study also showed that low physical activity was associated with increasing obesity in African women in both rural and urban areas, independent of the level of urbanization (Kruger et al., 2002). An evidence of this can be seen in the freedom of movement among the black population in South Africa which has increased their exposure to the global market economy (Bourne et al., 2002; Senekal et al., 2003). These dietary changes, combined with the rapid growth of ageing population, suggest that we can expect an escalating epidemic of chronic diseases, particularly obesity, diabetes and heart disease in developing countries in the coming decades (Tucker & Buranapin, 2001).

Childhood obesity is a major public health crisis nationally and internationally. It is caused by imbalance between calorie intake and calories utilized with one or more factors - genetic, behavioral and environmental contributing to obesity in childhood (Karnik & Kanekar, 2012). In addition to urbanization and generally among children and adolescents, females are more prone to obesity, with more overweight occurring prior to the growth spurt at 10 years, as well as after menarche (Monyeki et al., 1999). In a study of 447 rural children, none of the boys were overweight before the age of 15 years, after which there was an increase in subcutaneous skin-fold thickness with a peak at 17 years. Over-fatness, defined by sum of triceps and sub-scapular skin-fold thicknesses greater than the 85th percentile, increased markedly in girls after menarche and peaked at 17 years, with 11% of girls being over-fat (Cameron & Getz, 1997). This rapid epidemiological transition is attributed to increasing urbanization and changing lifestyles which has resulted in an increase in the incidence of non-communicable diseases.
3 Social and Cultural Dimensions of Obesity Epidemic in Africa

There are predisposing factors to obesity, which are key challenges related to culture. For example, being overweight in the African culture is a symbol of wealth, autonomy, attractiveness and happiness. Obesity is generally seen as a representation of beauty and success (Mokhtar et al., 2001). In some cultures, fat and carbohydrate intake is high while ethnicity plays a major role in the incidence and pathogenesis of co-morbid diseases throughout Africa. Ethnicity is used to categorize populations on the basis of their cultural characteristics such as shared language, ancestry, religious traditions, dietary preferences and history. In line with ethnicity looking at culture, culture shapes eating habits as seen in some social gatherings where overeating is encouraged because of abundance of food. Also, some ethnic groups value fattening of girls before marriage so that they can be made attractive to their prospective husbands (Rguibi & Belahsen, 2006).

In Nigeria, obesity is socially and culturally acceptable; thus, it is not recognized as a medical problem. A study on obesity conducted by Iloh et al. (2010) on 9,296 Nigerians adult patients showed that 14.8% were aware of their obese condition; out of these, 46.5% had knowledge of lifestyle modification. However, majority (72.3%) of those who had knowledge of lifestyle modification demonstrated low knowledge level of lifestyle modification. The complex behavioral and social factors including environments, unhealthy food choices and discouragement of physical activity have been documented to be a driving force of the epidemic of population-wide obesity. Oyeyemi et al. (2012) showed that an environment which is aesthetically unpleasing and unsafe for traffic as well as perception of threat of crime will make one more likely to be overweight. Their findings also had gender connotations as an environment characteristic of poor aesthetics and unsafe traffic were related to overweight in women only. On the contrary, men are seen to engage in physical activity involving pedestrian facilities in densely populated neighborhoods because of the stimulating and role model effects of being seen to engage in a healthy-enhancing behavior. The study concluded that neighborhood environment factors such as access to commercial destinations, neighborhood aesthetics and safety from crime and traffic were associated with overweight among Nigerian adults.

Other researchers have exemplified the relationship between lifestyle and obesity. Some African countries associate certain food with social status. For instance, obese women in Tunisia and Morocco take more calories and macronutrients than normal weight women. Fat intake in Tunisia is high (31%) while in Morocco the carbohydrate intake is 65% - 67% (Mokhtar et al., 2001). The occurrence of malnutrition and micronutrient deficiencies is a public health concern. Recent studies on dietary intake in Tunisia observed that an increase in food supply, on the one hand, leads to an improvement of diet quality but, on the other hand, also results in increasing incidences of obesity and related diseases. Characteristics associated with supermarket use were urban milieu, small-sized households, greater educational attainment, higher economic level, steady income, or easy access (Tessier et al., 2008).

Social factors such as mass media, advertising and cultural traditions also influence food intake to an extent but these are usually under-estimated. Environmental factors exert a major influence and complicate dietary behavior (Allegri et al., 2011). However, ignorance of the real influence of environment and society on food choices could well blind consumers to the real significance of such choices. Another social factor which has influenced obesity epidemic is prolonged television viewing. According to Huffman et al. (2012) in a study conducted among Americans of Cuban, Haitian and African descents, findings revealed that an average adult watches almost five hours of television per day, an amount associated with increased risks for obesity. Thus, television viewing has been positively associated with cardiovascular disease risk factors, lower energy expenditure, over-eating high-calorie and high-fat foods. Sission et al. (2012) also reported that less time spent watching television was associated with better dietary quality among children and adults in United States of America. The use of labor saving technology in the homes such as remote control might explain these findings.

Cultural perceptions on overweight and obesity are common in Africa. There is a cultural perception among some overweight South African black women in whom thinness is associated with HIV/AIDS; thus, this misconception leads to a shift in dietary intakes and activity patterns to that of high fat intakes with lower physical activity. Invariably, the increase in free fatty acids predisposes obese black patients to type 2 diabetes (Kruger et al., 2001).
et al., 2005). Other studies conducted on the interaction between obesity and hypertension showed a causal and consequential relationship. For example, Akintunde et al. (2010) showed that two thirds of hypertensive patients were either overweight or obese and suggested lifestyle modification, which is geared towards weight reduction. Furthermore, body size is associated with beauty in some settings (Davidson & Knafl, 2006). This was corroborated by Onayemi (2004) who reported participants in a study on beauty in the African/Yoruba Art as saying “for the Yoruba and indeed Africans generally, full fleshed woman is preferable to the thin, almost male-like figures of young classical women”.

4 Review of Intervention Strategies and Recommendations

Until recently, health systems in most African countries have not focused on prevention or treatment of obesity; hence, few programmes are in place to address this rapidly growing problem (Tucker & Buranapin, 2001). The International Obesity Task Force (IOTF) was established in 1994 to address the increase in the worldwide prevalence of obesity. The goals of the IOTF are to (1) raise awareness in the population and among governments that obesity is a serious medical condition, (2) develop policy recommendations for a coherent and effective global approach to the management and prevention of obesity, and (3) implement appropriate strategies to manage and prevent obesity on a population basis worldwide. It was suggested that the body mass index (BMI) expressed in kilogram per squared-meter (kg/m²) offered a reasonable measure of assessing fatness in children and adolescents and that the standards used in identifying overweight and obesity in children and adolescents should agree with those used in identifying grade 1 and grade 2 overweight i.e. BMI of 25 kg/m² and 30 kg/m² in adults respectively (Dietz & Bellizzi, 1999).

Evidence abounds that people can remain healthy into their seventh, eighth and ninth decades, through a range of health-promoting behaviors, including healthy diets, regular and adequate physical activity, and avoidance of tobacco use, among others. In realization of this, the World Health Organization (2004) declared a Global Strategy on Diet, Physical Activity and Health; with the declaration, it was widely believed that a significant step had been taken towards reducing deaths and diseases by improving diets and increasing levels of physical activity. The strategy aimed at promoting and protecting health by guiding the development of an enabling environment for sustainable actions at individual, community, national and global levels that, when taken together, will lead to reduced disease and death rates related to unhealthy diet and physical inactivity. Recently, an Action Plan (2008-2013) on the global strategy for the prevention and control of non-communicable diseases was developed; the action plan builds on the Global Strategy on Diet, Physical Activity and Health by providing road map required for establishing and strengthening initiative for surveillance, prevention and management of non-communicable diseases (WHO, 2012).

Thus, most intervention strategies on obesity in developed countries had been designed as individual, family or community-oriented; some combine these approaches. For example, dietary advice is given routinely to expectant and postpartum mothers in order to control gestational weight gain and promote maternal, fetal and infant well being. Randomized controlled trials on dietary interventions during pregnancy had shown that this approach might be effective as dietary advice given during pregnancy decreased total gestational weight gain and long-term postpartum weight retention. However, the dietary intervention had no significant effect on weight retention at six weeks postpartum, birth weight, preeclampsia, gestational diabetes and preterm birth (Tanentsapfl et al. 2011).

As part of the overall management of hypertension in children and adolescents, Batisky (2010) suggested that weight loss, exercise and dietary interventions are strategies required for the control of overweight and obesity. The interventions should hinge on therapeutic lifestyle changes in the children and adolescents with a great deal of motivation on the part of the patient, the patient’s family and the patient’s care providers. He further opined that although, not all strategies might be effective for every individual, but to some extent all patients being treated for hypertension should be encouraged to incorporate elements of therapeutic lifestyle changes into their treatment regime. Likewise, Lifestyle Triple P, a childhood obesity intervention strategy, is a parent-focused group program aimed at changing general parenting styles and specific parenting practices with respect to nutrition, physical activity and positive parenting strategies. Its efficacy in preventing excessive weight gain in overweight and obese children has been
established through randomized trials (Gerards et al., 2012).

Replicating these success stories of obesity intervention strategies in African countries may be a daunting task for a number of reasons. Firstly, social and cultural perceptions of obesity are common and diverse; secondly, safety and security of lives in the neighborhood required for free and frequent recreation remain a major challenge; thirdly, communicable diseases and under-nutrition remain a more apparent threat to improved health indicators than obesity and non-communicable diseases; and fourthly, the setting is characterized by weak health systems due to paucity of funds, among other factors. All these contribute partly to the low priority given to obesity interventions in African countries and hence, and paucity of data.

From the foregoing, it is imperative that obesity interventions in African countries are designed and packaged with due cognizance to the social, cultural and environmental context of the population. As in the developed countries, obesity intervention programs have been implemented in African countries through various methods such as family-based, school-based, community-based and hospital-based approaches, either singly implemented or in combination. Presently, it is known that governments and health care organizations, through collaboration between the Ministries of Health and Education, continue to take effective actions such as policy changes and environmentally safe interventions for children in order to provide healthy diets and improve physical activity in schools. This is being achieved through national school health policies, which encompass healthful school environment including provision of safe play areas, school feeding services and skill-based health education including dietary education, among others (Federal Ministry of Education Nigeria, 2006; Ministries of Public Health/ Sanitation and Education Kenya, 2009). It is noteworthy that these efforts are primarily aimed at preventing and controlling under-nutrition among school children which is more prevalent than overweight in most African countries; however, if properly coordinated and adequately implemented, these multi-component interventions in schools have inherent potentials to tackle overweight and obesity in children. These interventions combined with activities aimed at reducing children's television viewing had been shown as promising strategies for halting childhood obesity as they promote physical activity, access to healthy diet education and provision of healthy diet (Karnik & Kanekar, 2012; Luckner et al., 2012).

In adult pregnant and non-pregnant populations, primary prevention of overweight and obesity through population-based and lifestyle-linked programs as well as cost-effective methods for detection and management are required, especially in poor resource settings of Africa. Thus, the existing public and private healthcare infrastructure needs to be orientated and strengthened to meet the challenges of obesity. In view of this, it is suggested that national governments and international development partners in Africa build capacity of health care providers and health facilities to respond to the emerging challenges of obesity epidemic. For instance, health service points for antenatal care, routine medical screening and check-ups, and specific diseases such as hypertension and diabetes mellitus should be strengthened with state-of-art infrastructural facilities required for screening, detection, preventing and management of overweight and obesity.

Health systems strengthening should be supported by empowerment of the population with appropriate context health education and nutritional interventions aimed at behavioral changes. Thus, it is desirable to review the existing health education and nutritional intervention programs, which are provided to the users of health service points and the general population through social media with a view to re-packaging the programs responsively to the social and cultural milieu of the target audience. This effort should be complemented with other measures such as regulating the activities of fast-food points to provide healthy diets and increasing access of individuals and households to healthy diets through a discount price intervention (An et al., 2013).

The WHO Global Strategy on Diet, Physical Activity and Health (2004) recognizes the central role of national governments, in cooperation with other stakeholders, in creating an environment that empowers and encourages behavioral changes by individuals, families and communities; these changes are required to make positive, life-enhancing decisions on healthy diets and patterns of physical activity. In view of this, multi-level, multi-sectoral and context-appropriate environmental interventions such as community policing, neighborhood recreation grounds, roadside lighting, traffic regulations and pedestrian walk pathways are suggested;
these could help improve safety, security, sanitation and aesthetics of the environment and consequently reduce television viewing and promote recreation and physical activity among the population.

5 Conclusion

Undoubtedly, overweight and obesity are among the greatest threats to human health in the 21st century. Obesity in Africa is related to acculturation, associated with complex socio-cultural pathways, changes in dietary patterns, socioeconomic circumstances, and physical activity levels. Therefore, there is a dire need to address the environment and culture which currently support unhealthy lifestyles. While further research is suggested in understanding gender disparities in obesity pandemic, interventions are urgently required to reduce weight gain particularly among women; such interventions should take into cognizance the social, cultural, and gender-specific aspects of weight gain.

Intervention frameworks should be designed to improve healthy living in a friendly environment. Such frameworks should involve inclusion of prevention of obesity as a relevant and appropriate-context topic in the public health agenda in the developing countries; unarguably, this would promote accessibility to reliable information on determinants and consequences of obesity by all social classes in African countries. In addition, there is a need to design and implement consistent public actions on the physical, economic, and socio-cultural environment which promote healthy choices with respect to diet and physical activity. The food industry can play a significant role by promoting healthy diets. In addition to this, the food should be made affordable and accessible to all consumers.

Furthermore, interventions aimed at changing eating and activity patterns, influencing cultural factors, perceptions and beliefs, and minimizing the effect of urbanization and globalization on healthy living should be considered. While health systems in the African countries require strengthening to implement interventions effectively and deal with the challenges of cultural perceptions and norms favoring obesity, national governments and other stakeholders should combine their efforts aimed at creating and supporting a friendly-environment which promotes healthy diets and physical activity.

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