Sports Nutrition and Therapy
ISSN: 2473-6449

Comegna, Sports Nutr Ther 2017, 2:1
DOI: 10.4172/2473-6449.1000121

Research Article OMICS International

Prevalence of Obesity in the UK According to Sex, Age and Ethnicity: A Literature Review

Comegna S*

Nutrition and Public Health Division, Department of Life Sciences Human Food, University of Westminster, Faculty of Science and Technology, UK

Abstract

Objective: Obesity is one of the major public health challenge, particularly among low-income and minority groups. The aim of this review is to identify prevalence of obesity among black minority groups (BME) living in middle-upper and high-income countries with a special focus on the UK population.

Methods: A literature searching was performed using MEDLINE, Cochrane Database of Systematic Reviews (CDSR) and Cochrane Central Register of Controlled Trials (CENTRAL) using the following key words: obesity, fat mass, BMI, ethnicity and minority group.

Results: African and Caribbean (AC) women have the highest prevalence of obesity (38% and 32%, respectively) hypertension, type II diabetes and stroke compared to all other ethnic groups in the UK.

Conclusion: The cause of obesity prevalence is not fully understood yet. Changes in the food environment, including the propagation of foods high in energy and fat content and low in nutrients, have been mirrored by the obesity epidemic among BME living in the UK. Further researches are needed to explore in depth the relationship between dietary habits and ethnic differences.

Keywords: Ethnicity; Minority group; Obesity; Fat mass; BMI

Introduction

Obesity is one of the major public health challenge, particularly among low-income and minority groups [1]. Obesity, defined by body mass index (BMI) of ≥ 30 kg/m^2 (WHO), was first recognised as a disease by WHO and it is a confirmed risk factor for a large number of health conditions, including cardiovascular disease and mortality [2]. Data from The Lancet on prevalence of overweight and obesity among adults aged 20 years and above, in 2013 show that the highest proportion of obese men and the second highest proportion of obese women has been found in the USA with 31.7% and 33.9%, respectively. The highest prevalence of obesity among women with 34.1% has been found in Turkey and the highest proportion of overweight in men with 73.6% has been found in the Iceland. The highest prevalence of overweight among women has been found in Mexico. Conversely, Japan has the lowest prevalence of obesity among men (4.5%) and women (3.3%) as well as the lowest prevalence of overweight for both men (28.9%) and women (17.6%) [3]. In the UK, data from the Health Survey England 2014 indicate that 61.7% (66.4% of men and 57.2% of women) of adults and 31% of children are overweight or obese [4]. The UK is ranked 8th out of the 34 OECD (Organisation for Economic Cooperation and Development) countries for prevalence of overweight and obesity for men and women combined. The proportion of obese men in the UK is 5th highest at 24.5% and for women is 10th highest at 25.4% [5]. Overweigh and obesity prevalence among race ethnic minority group in USA and UK shows that respect to general population, the highest rate of obesity is among non-Hispanic black women with the 46% [6] in the USA and the 32% in the UK [7]. If past trends continue, there will be 65 million more obese adults in the USA and 11 million more obese adults in the UK by 2030. Obese and overweight individuals also place a significant burden on the UK NHS (National Health service). Direct costs are estimated to be £4.2 billion and foresight have forecasted that this will more than double by 2050 if we continue as we are. But there are also costs to society and the economy more broadly – for example, sickness absence reduces productivity. Foresight estimated that weight problems already cost the wider economy in the region of £16 billion, and that this will rise to £50 billion per year by 2050 if left unchecked [8]. The aim of this literature review is to identify prevalence of obesity among black minority groups (BME) living in middle-upper and high-income countries with a special focus on the UK population.

Methods

A literature searching was performed using MEDLINE, Cochrane Database of Systematic Reviews (CDSR) and Cochrane Central Register of Controlled Trials (CENTRAL). Reference lists of original studies and other related reviews were also examined. Additionally, public health web -sites, such as Department of Health, Public Health England, NICE (National Institute for Health and Care Excellence), NOO (National Obesity Observatory) were also searched in an effort to access the grey literature. The following key terms were applied in the title/abstract to retrieve relevant studies: ethnic* OR minority OR race OR black* OR African* OR Caribbean OR ethnicity AND obesity OR fat mass OR BMI.

Results

The UK population is becoming progressively more diverse, with 14% of the population considered as non-white. Approximately, 73% of UK population growth is from the black and minority ethnic groups (BME), with Black Africans being the fastest growing ethnic group [9].

***Corresponding author:** Comegna S, Nutrition and Public Health Division, Department of Life Sciences Human Food, University of Westminster, Faculty of Science and Technology, UK, Tel: +44 (0)2079115000, Mob: +356 99629756; E-mail: w1526969@my.westminster.ac.uk, stefania@nutritionalmaster.it

Received March 10, 2017; **Accepted** March 17, 2017; **Published** March 31, 2017

Citation: Comegna S (2017) Prevalence of Obesity in the UK According to Sex, Age and Ethnicity: A Literature Review. Sports Nutr Ther 2: 121. doi: 10.4172/2473-6449.1000121

Compared to the general population the burden of chronic diseases such as obesity, hypertension, type II diabetes and stroke are higher among BME populations [4]. Using BMI as measure, findings suggest that, compared to general population (23% men and 23% women), obesity prevalence appears to be higher among Black African (38%), Black Caribbean (32%) and Pakistani (28%) women and lower among Chinese (8%) women. Conversely, obesity prevalence is lower among men from Black African (17%), Indian (14%), Pakistani (15%) and most markedly, Bangladeshi (6%) and Chinese (6%) [10].

Further analysis from the British Heart Foundation, 2010 found that this pattern changes when waist-to-hip ratio is used. Women from Bangladeshi (50%), Black Caribbean (37%), Pakistani (39%) and Irish groups (37%) have a high waist-to-hip ratio (0.95 and over) compared to women in general population (33% men and 30% women), with Bangladeshi women nearly twice as likely [11]. Childhood obesity prevalence has doubled over the last two decades in the UK and it is predicted to continue to rise with an increasing of type 2 diabetes, heart disease and a range of other related disease during early adulthood. Studies in USA and UK have shown that childhood obesity is correlated with ethnicity, with Black African girls are more obese or overweight compared to their white peers [12]. The National Obesity Observatory (NOO) in 2010 report that obesity prevalence in the UK is high especially for children year 6, of both sexes from Black African (26% boys, 27.3% girls) and other Black groups (25.1% boys and 26.4% girls) and among boys from the Bangladeshi ethnic group (29.1%) [13]. Among adolescents aged between 11 and 16 the overweight prevalence is prevalent among Black African and Caribbean girls and obesity more prevalent among Black Caribbean girls [14].

Conclusion

Obesity can be explained by an imbalance in energy intake and energy expenditure [15]. However, the cause of such imbalance on a population level is not fully understood yet. Significant changes in the food environment, including the propagation of food outlet, convenience and fast foods high in energy and fat content and low in nutrients, have been mirrored by the obesity epidemic. There are no studies in the UK that have explored in depth the ethnic patterns in childhood or adolescent obesity in relation to the health-related behaviours of both parents and children. Findings from the DASH study, show that obesity related behaviour differ by ethnicity and this contribute to an ethnic differences in overweight in early adolescence. It seems that children of ethnic minorities are more susceptible than migrant parents to the obesogenic environment shown by increasing fat intake. However, further researches are needed to explore in depth the relationship between dietary habits and ethnic differences in obesity.

References

1. James WP (2008) WHO recognition of the global obesity epidemic. Int J Obes 32: S120-S126.
2. Must A, Spadano J, Coakley EH, Colditz, G, Field AE, et al. (1999) The Disease Burden Associated with Overweight and Obesity. JAMA 282: 1523-1529.
3. Ng M, Fleming T, Robinson M, Thomson B (2014) Global, regional, and national prevalence of overweight and obesity in children and adults during 1980–2013: a systematic analysis for the Global Burden of Disease Study 2013. Lancet 384: 766-781.
4. http://content.digital.nhs.uk/catalogue/PUB01170/hea-surv-ethn-min-eng-2004-rep-v1.pdf
5. www.hscic.gov.uk/healthsurveyengland
6. OECD (2016) Overweight or obese population.
7. Howel D (2012) Trends in the Prevalence of Abdominal Obesity and Overweight in English Adults (HSE 1993–2008). Obesity 20: 1750-1752.
8. Scarborough P, Bhatnagar P, Wickramasinghe KK, Allender S, Foster C, et al. (2011) The economic burder of ill health due to diet, physical inactivity, smoking,alcohol and obesity in the UK: an update to 2006-07 NHS costs. J Public Health (Oxf) 33: 527-535.
9. Census 2001: National report for England and Wales. London: Office for National Statistics.
10. Sproston K, Mindell J (2004) Health Survey for England 2004: Volume 1: Health of minority ethnic groups. London: The Information Centre.
11. Scarborough P, Bhatnagar P, Kaur A, Wickramasinghe K, Rayner M (2010) Ethnic Differences in Cardiovascular Disease. London: British Heart Foundation.
12. Wardle J, Brodersen NH, Cole TJ, Jarvis MJ, Boniface DR (2006) Development of adiposity in adolescence: five year longitudinal study of an ethnically and socioeconomically diverse sample of young people in Britain. BMJ 332: 1130-5.
13. Dinsdale H, Ridler C, Rutter H, Mathrani S (2010) National Child Measurement Programme Changes in children's body mass index between 2006/07 and 2008/09. noo.
14. Harding S, Maynard MJ, Cruickshank K, Teyhan A (2008) Overweight, obesity and high blood pressure in an ethnically diverse sample of adolescents in Britain: the Medical Research Council DASH study. Int J Obes 32: 82-90.
15. Hill JO, Wyatt HR, Peters JC (2012) Energy balance and obesity. Circulation. 126: 126-132.

Citation: Comegna S (2017) Prevalence of Obesity in the UK According to Sex, Age and Ethnicity: A Literature Review. Sports Nutr Ther 2: 121. doi: 10.4172/2473-6449.1000121