



**PROCESS OF URBAN DEVELOPMENT LEADING TO AN OBESITY CRISIS: A
REVIEW**

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ABSTRACT

Obesity is defined as an abnormal accumulation of fat, which presents a risk to health. Individuals with a body mass index $\geq 30 \text{ kg/m}^2$ are considered obese. Obesity is a major health risk for chronic diseases such as diabetes and cardiovascular diseases. Previous research has established that obesity is more common in developed nations. Research has also shown that people living in urban areas are more likely to become obese than those living in rural areas. The following is a discussion of various studies that evaluate the relationship between obesity and urbanization. This systematic review aimed to determine the factors that cause obesity, to establish a relationship between obesity and urbanization, and examine if a lack of physical activity leads to obesity. Urbanization and obesity have a significant relationship. The results of the present study determined that $> 60\%$ of people with obesity in the United Kingdom live in urban areas. Therefore, a child or person living in an urban area is more likely to become obese compared to a person living in a rural area. Urbanization does not independently influence obesity; hence, other factors considered. The research establishes that urbanization leads to an increase in the risk of becoming obese in the United Kingdom.

KEYWORDS: Obesity, Child, Urbanization, United Kingdom.

INTRODUCTION

Obesity is rapidly becoming the most frequently diagnosed chronic disease across all age groups in many countries. Apart from causing death, obesity leads to approximately 30,000 early deaths each year and has become a public health problem in the United Kingdom (Nortoft *et al*, 2017). In the United Kingdom, despite a reduction in calorie consumption in the last 27 years, the prevalence of obesity in the previous 20 years has increased three-fold. The annual cost of treating obesity is approximately 3.7 billion sterling pounds (Michimi and Wimberly, 2012). The various factors that contribute to obesity are referred to as the obesogenic environment. These factors include city planning, school life, and neighborhood relations. Past research indicates that obesity has serious implications for both physical and mental health. Many other factors such as diet, physical

activity, and environment influence may also affect a person's body weight. Weight gain is the consequence of an imbalance between energy consumed and energy expended. This study sought to evaluate whether urbanization has resulted in the obesity crisis in the United Kingdom.

MATERIALS AND METHODS

The present study used a quantitative research method. The method was chosen because the study was based on the results of previous studies that were mostly numerical (Taylor, 2017). Forty-eight research articles relating to the subject matter in Europe were identified. Of these, the 12 most relevant articles were included in the present analysis. Some of the journal articles were rejected because they had been published more than 10 years ago. The research was wide in scope and included

all demographic groups that could be affected by the subject under review.

RESULTS AND DISCUSSION

The main objective of this study was to determine the relationship between urbanization and obesity in the

United Kingdom. The study analyzed 12 research articles to understand the results of previous studies on this subject. The results of the present study determined that > 60% of people with obesity in the United Kingdom live in urban areas.

Table 1: Percentage of obese people in rural areas vs urban areas.

Population type	Overweight population	Obese population	Percentage of total population
Urban	50	70	35%
Rural population	41	59	28%

Source: IASO 2013

Table 2: What is the favourite meal for each respondent?.

Type of food	Obese	Overweight
Vegetable	8%	10%
Fruits	6%	13%
Meat	18%	22%
Wholegrain	3%	2%
Pizza and Ice cream	30%	36%

Source: researchgate.net

Table 3: Relationship between obesity and physical activity.

Classification of respondents	Normal weight (%)	Overweight (%)	Obese (%)
Active	54.6	29.1	16.3
Inactive	32.6	42.7	24.7

Source: ebook.ecog-obesity.eu

Table 4: Relationship between social and economic status and obesity.

Social class	Normal Weight (%)	Over Weight (%)	Obese (%)
High class	65.7	21.2	13.1
Middle class	58.2	26.8	15.0
Lower class	49.5	29.1	21.4

Source: jamanetwork.com

Table 5: Obesity and alcohol consumption in rural vs urban areas.

	Normal Weight (%)	Over Weight (%)	Obese (%)
Consumes alcohol	51.9	34.5	13.6
Does not take alcohol	62.7	27.8	9.5

Source: ibimapublishing.com

Many researchers found that the prevalence of obesity in urban areas is higher than that in rural areas. This is influenced by a variety of factors such as diet, physical exercise, and lifestyle. However, several studies have reported contrary findings. According to Sarkar *et al* (2014), the rate of obesity is increasing in rural areas compared to that in urban areas in the United Kingdom. The research indicates that the United Kingdom is following the same pattern as that of the United States in which there are more people with obesity in rural areas as compared to those living in urban areas. (Kushner and Bessesen, n.d.) The authors propose that the risk of obesity in rural areas in the United Kingdom is increasing because a large proportion of professionals live in urban areas. Professionals may also visit the gym more frequently compared to people in rural areas.

According to Lewis and Leitch (2015), people living in rural areas are less likely to be obese as compared to people living in urban areas. A study of seven European countries by Lewis and Leitch (2015) found that the likelihood of obesity was about 40% lower in people living in residential environments with high levels of green features. A study conducted in Bristol showed that living far away from rural areas with green environments was associated with obesity. The research further indicated that the association was lost once other factors affecting weight were considered.

Oddy, *et al* (2009) reported that the 70 obese individuals in their study population of 200 people were from urban areas. The high prevalence of obesity among people in urban areas in this study was attributed to their diets. The authors found that people living in urban areas more

often consume high-calorie 'junk' food. Oddy, *et al* (2009) interviewed people from urban areas who were obese, who indicated that they consumed pizza at least three times every week. Ten people indicated that they consumed pizza at least five times each week. In contrast, the most common foods consumed by people living in rural areas included red meat, cheese, and other foods rich in carbohydrates. The study found out that 70% of people in rural areas mainly consumed non-processed food grown locally in the villages (Barnett & Kumar, 2009). These foods are mostly vegetables and plant proteins. The study concluded that diet played a significant role in causing obesity among people living in urban areas. However, the study also showed that the ecological environment alone does not influence whether a person becomes obese.

A study conducted by Waters and Wiley (2010) in a population of 400 people of different demographic groups showed an indirect relationship between obesity and urbanization. Out of 500 people interviewed, 180 were obese. The study classified these 180 respondents into those residing from rural areas and those coming from rural areas. In their study, 130 respondents were from urban areas. This is approximately 72% of the total number of people who were found to be obese. Hankey *et al.* (2018) investigated the factors that may contribute to the high rate of obesity in urban areas compared to the rate in rural areas. He found that people in urban areas were less physically active compared to those living in rural areas. Hankey *et al.* (2018) reported that people living in towns were not involved in physically demanding activities. The study also observed that people living in towns did not walk much, mostly using vehicles for transportation. The research also established that people in rural areas are more likely to attend a gym. Another study by Offer *et al.* (2012) showed that people living in urban areas were eight times obese as compared to those from rural areas. Neither asset index nor the level of education was associated with a higher risk of becoming obese. The authors suggested that obesogenic environments might explain why people living in urban areas are at high risk of obesity compared to that among people living in rural areas. The study explained that urban dwellers were more physically inactive and sedentary as compared to rural dwellers. Moreover, saturated fat and foods rich in energy are consumed at high frequencies in urban areas. Another explanation for the high risk of obesity among urban populations is socioeconomic differences. People living in rural areas have less access to transportation leading to increased physical activities such as walking. The authors also proposed that people in urban areas have better access to junk food, resulting in high risk of obesity for people living in those areas. (Kushner and Bessesen, n.d.) reported that childhood obesity is related to the environment in which the child lives. Obese individuals are more often found in communities with little socialization. A child is living in an area with walking

parks, playgrounds and with many other children is less likely to become obese.

These facilities are more commonly found in urban areas; therefore, children in urban areas are less likely to become overweight. Geissler (2010) reported that there is a greater risk of becoming obese when living in an urban area in the United Kingdom compared to the risk when living in rural areas. He explained that during industrialization in the United Kingdom, most buildings in modern cities lacked space for children to play.

A study conducted in London by Fung (2016) showed that traditional neighbor relationships also influence obesity. According to the study, houses which are very close to one another lead to shorter walking routes thus increasing the risk of children becoming obese. The study also reported that people living in urban areas in the United Kingdom consume alcohol compared to people in rural areas. Research has indicated a close relationship between alcohol consumption and obesity. People who drink alcohol are more likely to become overweight. According to the researcher, this factor explains why there are more people with obesity in urban areas.

Moreno, *et al.* (2011) reported that there is a significant health gap between the rich and the poor. Rural areas have more poor people in rural areas in the United Kingdom compared to that in urban areas. The results show that women in inner London were 8% less likely to have long-standing illnesses as compared to people in less developed cities.

Additionally, people in rural areas have less active social lives and spend more time watching television. People in lower socioeconomic classes spend more time watching television because they are poor and have limited time and resources for social and physical activity (In Ahn *et al.*, 2015). The research, therefore, establishes that there is a close relationship between urbanization and obesity when other factors that contribute to obesity are taken into consideration (Selbie, 2018). The strength of this study is that the methodology used obtains accurate and current data on this subject. The study also uses diverse sources of literature. The limitation of the research is that the sample sizes used in most studies were too small and therefore may not truly reflect the real situation.

CONCLUSION

Obesity is the excessive buildup of fat in the body which results in a person becoming overweight. Obesity causes serious health problems such as diabetes and cardiovascular diseases and impacts mental health. Numerous studies have assessed the impact of urbanization on obesity. The aim of the study was to understand the relationship between urbanization and obesity. The study also sought to identify the factors that contribute to obesity and how they differ between rural and urban areas. A literature review was performed to

help in achieving these objectives. Most studies have established the close relationship between urbanization and obesity. However, urbanization does not independently influence obesity; hence, other factors have to be considered. The results of the present study establish that urbanization leads to an increased risk of becoming obese in the United Kingdom. This study uses diverse, well-researched sources of literature.

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