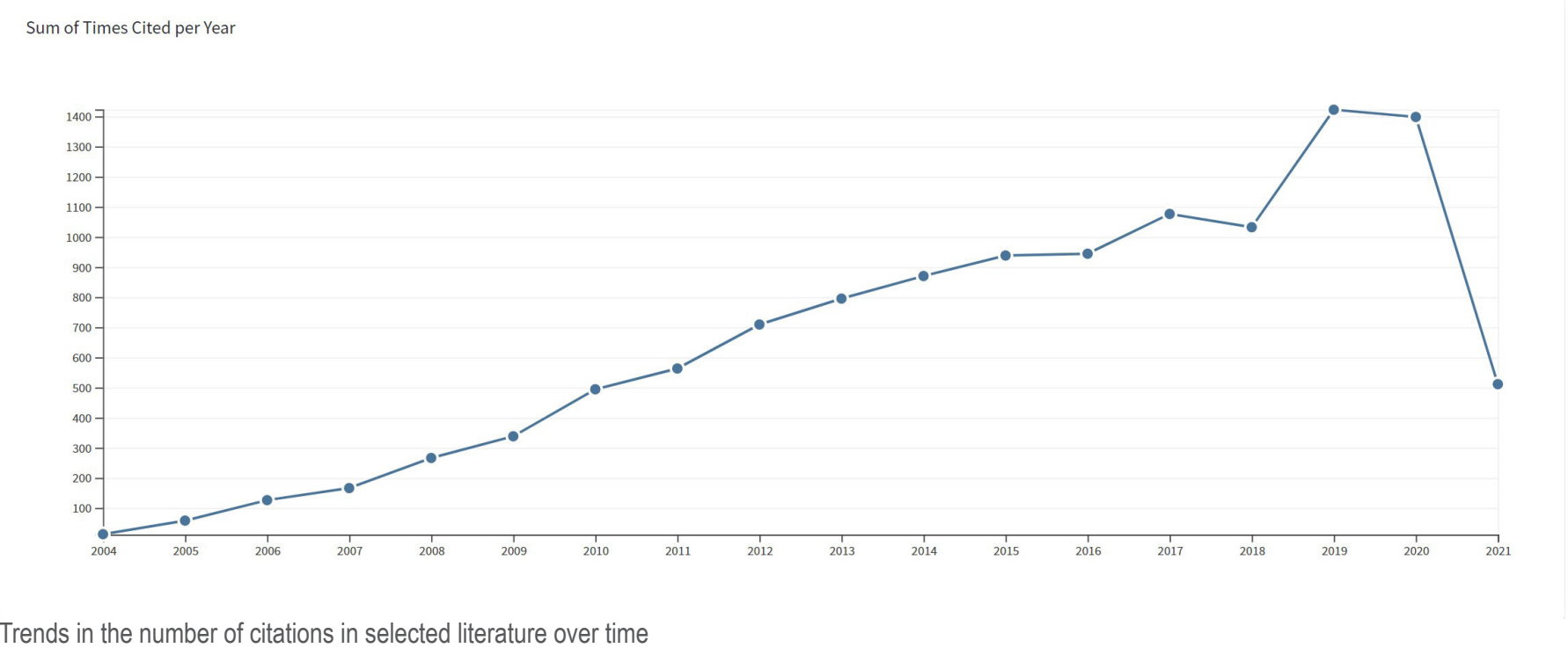
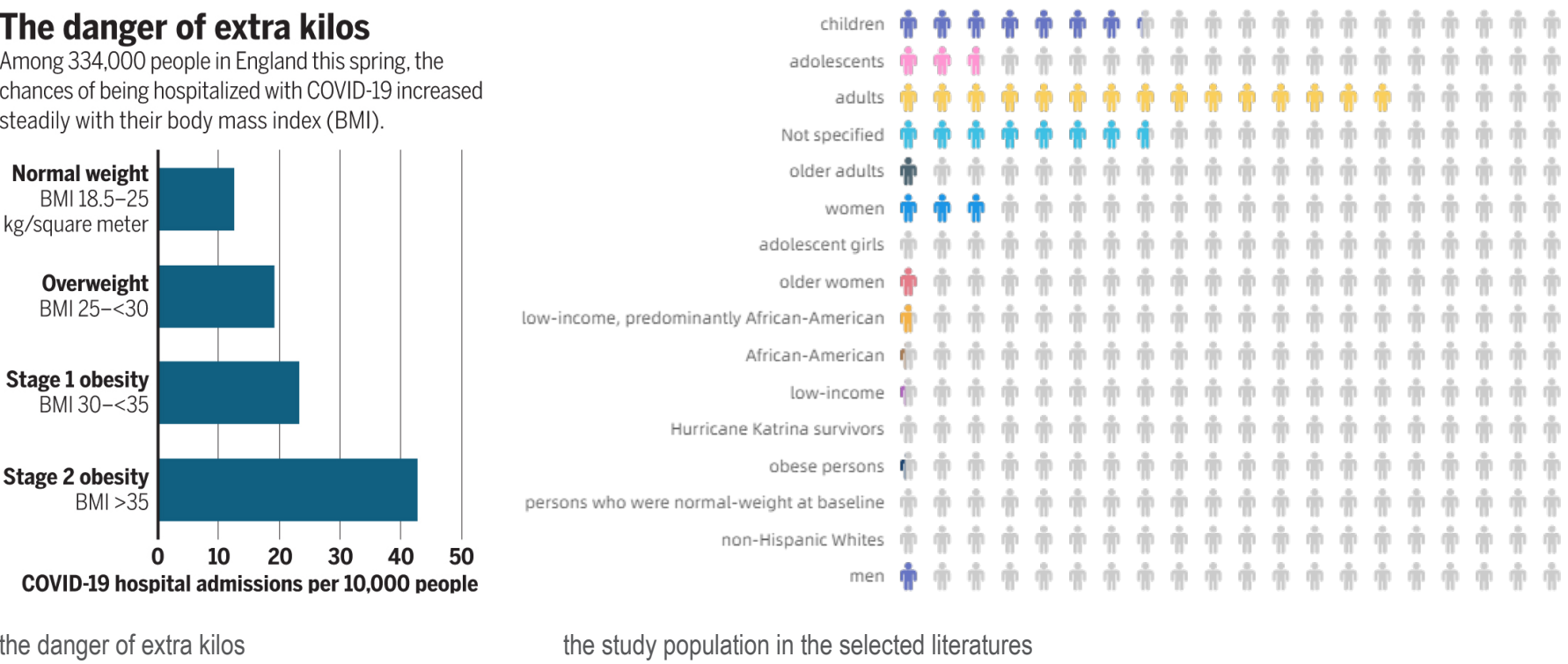


A Review of Correlation Between the Urban Environment and Overweight or Obesity

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Abstract

Studies have shown that obesity is related to severe COVID-19, and urban environment may cause residents to be obese. The relationship between urban environment and residents' health has been a topic that has lasted for more than ten years. Research on the correlation between overweight and obesity and urban environment has been carried out in various regions. Search the web of science database for the literature on obesity, overweight and urban environment in the field of urban planning in the past 20 years, review and analyze them. Environmental factors in urban spaces and obese or overweight residents are divided into five areas: urban morphology and development, urban and community environments, physical activity facilities, community food environments, social and other factors. Analyze the relationship between these factors and obesity or overweight and advise on urban and community design in preventing obesity.

keywords

Review, Urban Environment, Obesity, Overweight, Physical Activity, Food Environment

Introduction

A never-before-seen infectious disease was identified by Chinese healthcare professionals in December 2019, and due to the infectious and unknown nature of the virus, the disease broke out worldwide in a matter of months, with few countries being spared. On February 11, 2020, the disease was named COVID-19, and as of June 9, 2021, more than 12,000,000 people have been diagnosed worldwide. For one year and six months, scientists worked on the virus. Their efforts saved many lives and made a great contribution to human society. Scientists invented a number of vaccines and treatments, and everyone believed that the disease would be defeated by humans. One meaningful finding was that the rate of severe illness (hospitalization) with COVID-19 was related to their body mass index (BMI).

Obesity is a public health problem that plagues the world, and many cardiovascular diseases, diabetes and other diseases are associated with obesity. In addition to personal genetic factors, the root cause of obesity and overweight is the imbalance between energy intake and energy consumption. Overweight and obesity and their associated chronic diseases are largely preventable. According to the World Health Organization (WHO), supportive environments and communities are key to determining people's choices, making choosing healthier foods and regular physical activity the easiest options (most accessible, accessible and affordable) to prevent overweight and obesity. Over the past two decades, the impact of the urban environment on obesity and overweight has also become an important issue. The Lancet, a leading medical journal, published an article in 2003 entitled "Can you design a city that can beat obesity" and proposed the concept of an "obesity-causing urban environment".

In recent years, there has been some progress in the study of the impact of urban built environment on human health, and many scholars in urban design have studied the relationship between urban space and obesity, but at present, different results have been obtained at different times and regions, and these results are even the opposite. Further research is needed.

Method

We searched the literature on the web of science website. Only the literature that makes a correlation analysis between the urban environment and obesity is selected. The search field is limited to three fields of urban research, geography, and architecture. The search results selection principles are as follows: (1) Mainly based on the documents published in 2010-2019, and the results can be traced when insufficient; (2) Peer-reviewed academic English documents of journals; (3) Eliminate non-meaningful documents such as newsletters, reports, interviews, and irrelevant research topics, and eliminate review documents. According to the above retrieval steps and principles, 158 valid documents were finally obtained.

Result

For the first few years, the study was conducted mainly in the United States. Subsequently, similar studies were found in Canada, Australia, China, the United Kingdom and South Korea. Now, there are studies all over the world, and the same measurement factor or measurement method produces different results in different regions due to culture, habits, urban patterns or some other reason.

Therefore, the conclusions reached in one region may not be applied in other regions, and it is necessary to conduct research in different regions. The conclusions of the study in the same region may differ, and the validity of the conclusions needs to be verified.

The main key words of these documents are mixed functional functions, urban expansion, green space, food environment, physical activity, community environment and so on. Correlation factors from all literature are extracted and divided into five areas:

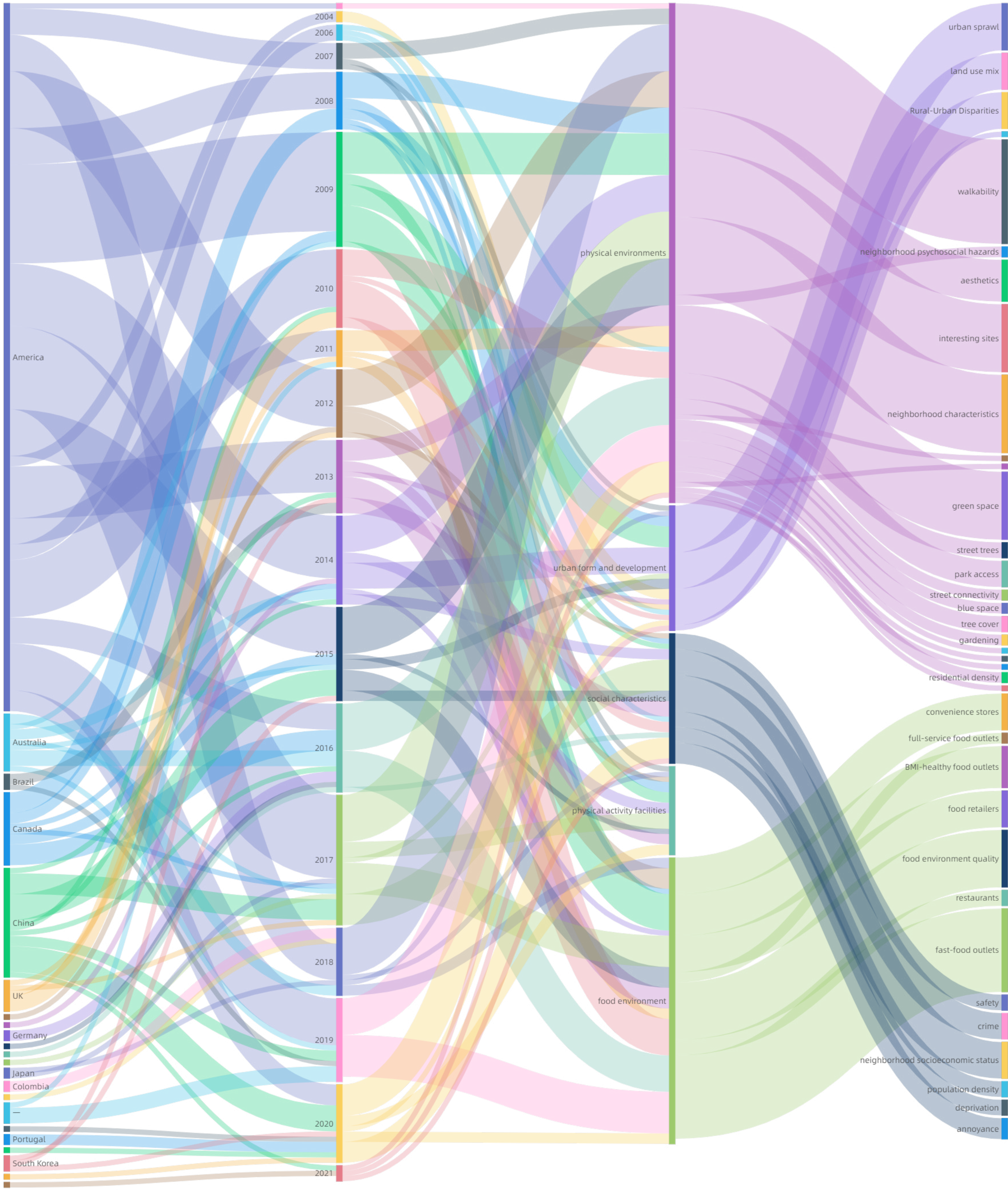
- Urban form and development
- Physical environment
- Physical activity facilities
- Food environment
- Social characteristics

In addition to objective measurement, the physical and social environment perceived by residents is an important factor that affects whether residents are obese. In fact, subjective perception and objective measurement are different ways of measuring environmental factors.

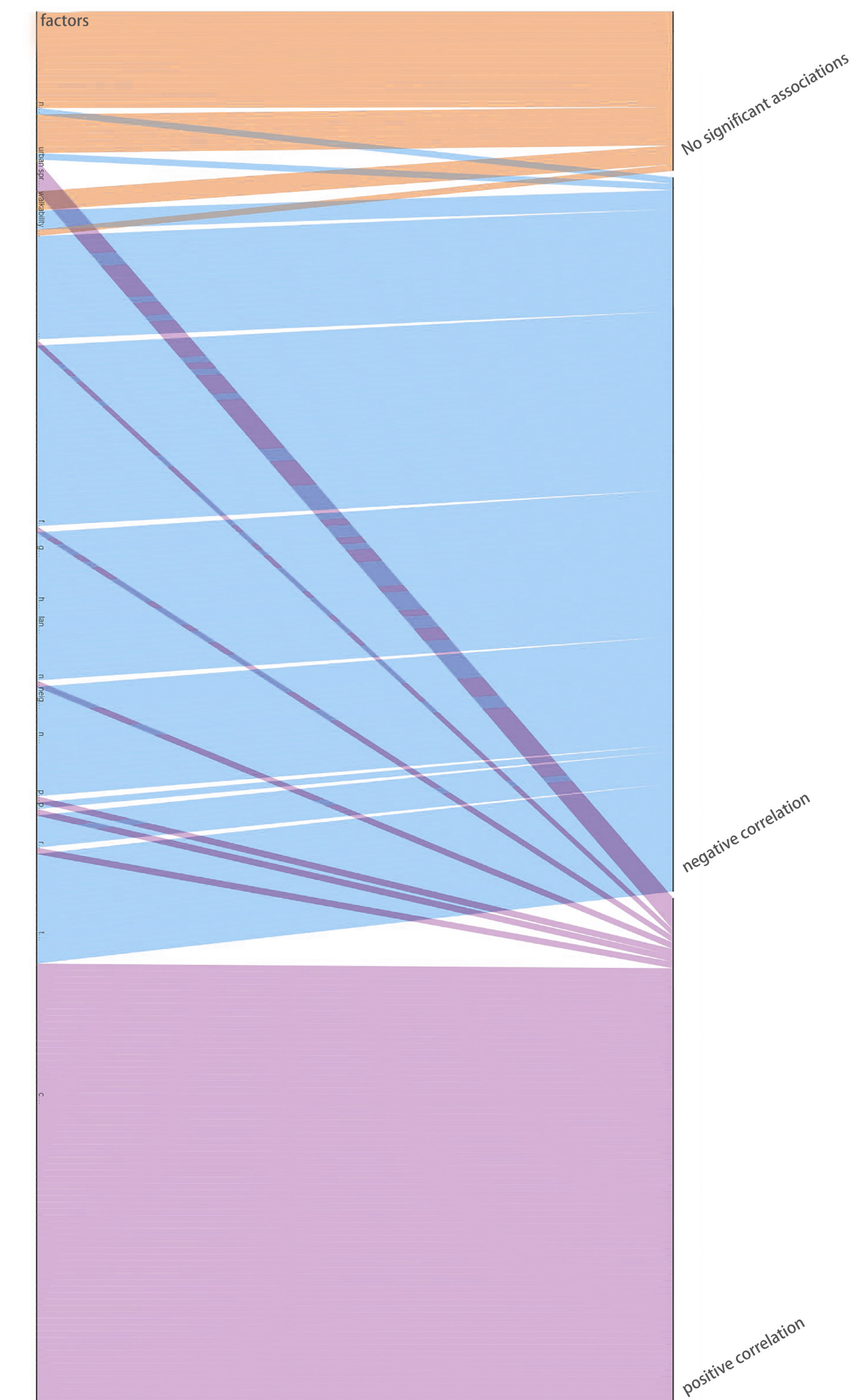
These studies focused on adults, adolescents, children, the elderly and women, with some authors focusing on low-income and vulnerable groups. There have also been studies on age, gender and race, and meaningful conclusions related to age, gender and race have been drawn. Research on different groups is significant. Many environmental factors show differences in the influence of different groups, which may be related to family division of labor and personality differences. The impact of crime rates and perceived safety on the health of women and children deserves special attention.

Discussion

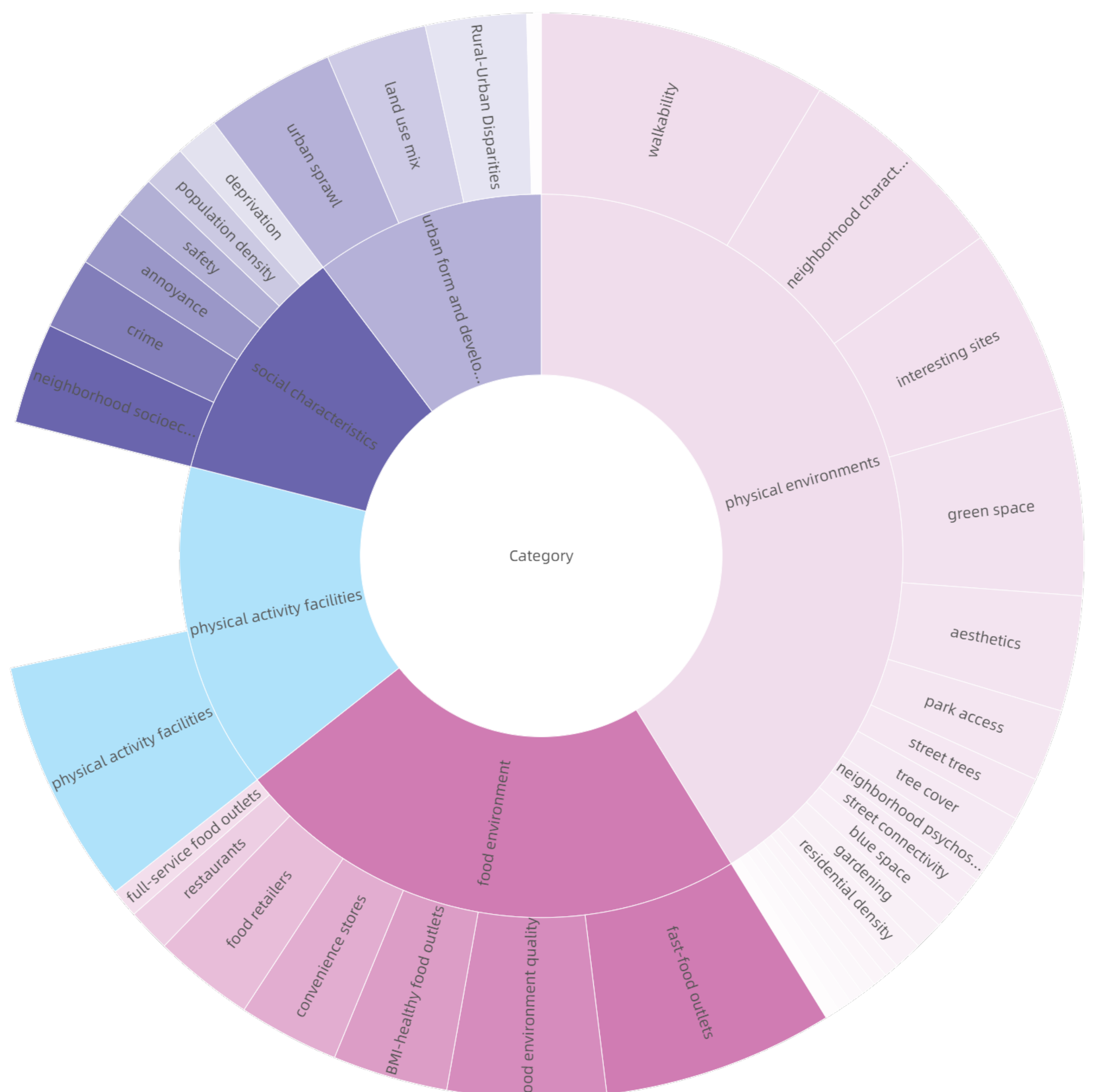
While the correlation between urban environments and obese or overweight residents needs further study, and existing studies show inconsistencies in different regions, some of the factors that we can clearly understand or foresee are. In view of the ethnology of obesity, it is beneficial to the health of residents to design a community environment more suitable for residents to engage in physical activity and improve their health in obtaining food. Obesity is not only associated with obesity, the impact of urban environment on health is much more than body type, psychological stress, depression, allergies and other diseases may be caused by poor urban environment. As residents' health awareness increases, the proportion of people who choose to exercise actively and control their diet to maintain their health is getting higher and higher, and the effects of urban environment on obese or overweight residents become more difficult to detect and measure. Architects should assume the necessary responsibilities for the health and well-being of human beings throughout the world.



An analysis of the selected literature(1)



An analysis of the selected literature(2)



An analysis of the selected literature(3)