Obesity Prevention-A Public Health Approach

Memoona Khalid, Mahnaz Nasir Khan

1. Lecturer Food Science and Human Nutrition Department, Kinnaird College for Women, Lahore Pakistan,

2. Head of Department Food Science and Human Nutrition, Kinnaird College for Women, Lahore Pakistan

Abstract
Obesity prevention is fundamental to control the obesity epidemic control. Rapid obesity prevalence has been reported in high and low middle-income countries during past few decades that is a consequence of overweight. The major causes of obesity epidemic include the change in social and physical environment of people. In Pakistan, obesity prevalence is alarming as it increases an overall burden on the nation. For the purpose of obesity prevention measures are required at community, national and international levels. Nationally no such preventive measures have been subjected, but globally many similar programs and campaigns have been successfully organized in past and present. In order to improve the public health status, the governments, non-governmental organizations and private sectors should participate equally. There is a need to address the problems and their solutions; the evidences and practices regarding with obesity prevention.

Key Words: Obesity, prevention, epidemic, prevalence, overweight

Introduction
Obesity epidemic rates are observance of the public health status of a nation. Obesity has health disastrous consequences including several chronic ailments; type 2 diabetes mellitus, cardiovascular diseases, asthma and sleep apnoea. For the overall improvement of public health, obesity preventive measures are mandatory. Obesity prevalence among adults has been increased in recent years. Achieving actions, International Obesity Task Force (IOTF) and practice-based evidenced are based for obesity prevention. The measures to prevent obesity are starting at community level, then comes national level and finally global level of obesity prevention is of great significance. Several policies and programs have been developed and some are needed to develop for obesity prevention. Nutrition education regarding obesity prevention, health care units expanding the obesity
preventive measures and appointment of registered dietitians at public health sectors will contribute towards the prevention of obesity at each level.

Figure 1: Trends in obesity among adult population of people in different parts of world.
Source: American Heart Association [3]

Obesity Prevalence
Obesity is a complex web of societal and biological aspects that exposed the inherent human vulnerability to weight gain [1]. In order to cause an increase in the obesity prevalence a community should be wealthy enough to have obesogenic products that are present of sedentary lifestyle. Genetic traits, socio-cultural factors, physiological and psychological health conditions are other causes of prevalence of obesity epidemics [2]. A toxic environment for health is that in which provides easy access towards fast foods and junk foods hence promoting obesity. Statistics showed that increased consumption of fast foods overall increased obesity with a ratio of 72% [3]. The problem of obesity in Asian adults has been increased in Asian adults for more than a decade. But the rate of prevalence of obesity is slower in Asian as compare to America and European countries due to their low and middle socioeconomic income state. As shown in figure 1, the trend of obesity is very less in Asian countries as compare to other countries. On the other side, the trends in overweight in Asian countries are approximately equal to that in other countries. So the obesity epidemic has primarily been observed in high income countries and in high-socioeconomic class of low or middle income countries [3].

Consequences of Obesity
Obesity has several health threatening consequences that are affecting the public health as a whole. Most of the obese people die due to cardiovascular diseases including coronary heart diseases (41% causes of deaths in obese persons), angina (32% causes of deaths in obese persons), heart ventricular failures (19% causes of deaths
in obese persons) and hypertension (8% causes of deaths in obese persons) [4]. Other health diseases caused by obesity include type 2 diabetes and asthma. The prevalence of type 2 diabetes among obese adults has been increased sharply in last few years. About 56% obese adults are also suffering from type 2 diabetes. Although genetic influence has also significance in the onset of type 2 diabetes but it is a factor that is equally being affected by obesity [4]. Asthma, a chronic pulmonary disease is another dangerous health consequence of obesity. In an obese person, the body fat accumulated over chest cavity exerts pressure upon the lungs hence causing difficulty in breathing increasing the risk of asthma. Over 23% obese persons are also suffering from asthma or any other chronic pulmonary disease [5].

**Obesity Prevention Evidence-based**

Clinical evidence of presence of obesity can be reported as far back as Roman times, but little scientific progress was made towards understanding the condition of being obese before 20th century [6]. The condition of obesity is now understood to a great extend and its health damaging consequences are very clear to scientists and medical researchers. These evidences that provide base for the prevention of obesity epidemic include increased burden of chronic diseases, inequality in the distribution of morbidity and mortality associated with chronic diseases and rising health care costs. These evidences are prompting towards the development of a cheaper solution to the addressing problem which can be the awareness, education, medical preventive measures and lifestyle modification strategies including different policies, programs and services [7].

The public health action for obesity prevention is resistant by mismatching of the magnitude and importance of this public health problem, and the adequacy of evidence on potential interventions to address it. Effectiveness of evidences and impediment to action turns into a perfect solution to the problem [8]. This process of evidence-based obesity prevention is easily understandable by the International Obesity Task Force (IOTF) which is a framework for an evidence-based approach to obesity prevention. Identification of key issues related to obesity prevalence like the high risk group, high levels of fast food and sugar-added carbonated drinks consumption and decrease in physical activity. These key issues are then subjected to find appropriate evidences for them. Then on the bases of these evidences the outputs are made guiding towards the decision-making process for obesity prevention. Sometimes, evidence itself is insufficient to guide a decision making process, so it need practice-based evidences. In order to achieve a broad portfolio to get promising interventions for obesity prevention requires a process by which the key stakeholders in all decisions [9].

**Obesity Prevention at Community Level**

Obesity prevention process is most successful at the baseline or community level at which the target population is directly addressed. Obesity epidemic is prevalent among all genders and age group [10]. Community-based obesity prevention measures are fundamental composed of awareness campaigns about the causes and consequences of obesity. Such programs have successfully been run in primary and secondary schools, universities, public health care facilities, vocational training centers and internship programs [11]. A range of diet and physical activity strategies, whether individual or multi-component, are likely to work if they are implemented in the right way. Ineffective programs may have diluted their interventions dose by overemphasizing the scientific, rigor of the evaluation methods. They may also have spread themselves too thin by applying limited resources across too many components, or across a heterogeneous target population.
Another potential trap was an over-emphasis on environmental changes that support the behavioral change being sought [12]. Whole-of-community demonstration areas have been recognized as an integral part of the national strategic approach to obesity prevention. Their advantage is that they provide a context in which scientific evidence can be implemented in multiple settings. The evaluations of these whole-of-community programs may need to extend for many years. It takes several years to gather sufficient momentum to social marketing needs to get through, community attitudes and expectations about healthy choices need to change, and many organizations need to reorient towards the overall programs goals [13].

**Obesity Prevention at National Level**

As government gear up to tackle the epidemic of obesity in children, they will be able to draw on the types of strategies, policies and programs that have worked to control other epidemics. The usual comparison epidemics are smoking, road injuries, HIV/AIDS, skin cancer and cardiovascular diseases [14]. Several countries have developed national plans of action that incorporate existing knowledge and activities, and recognize current policies, systems and capacities. The policy content for obesity prevention may vary from country to country. Some may stand-alone obesity prevention plans including a nutrition and physical plan of action. It is the implementation of the plan that is the problem. Most of the countries have not turned general plans into specific actions that are backed by the necessary funding and policies [15].

Schools continue to be a priority setting for obesity prevention in children and adolescents. So obesity prevention strategies at national level among this age group can be achieved by making policies like ban on soft drinks; mandating and increasing physical education time; strengthening curriculum on healthy eating and physical activity; linked in-school and after-school activities with spot and recreation clubs; and social marketing of healthy eating to parents [16].

Marketing obesogenic foods (sweetened carbonated drinks and fast foods etc) directly to children is a huge business. For food companies, it clearly increases sales of products, whereas for parents and public it undermines healthy eating messages and make the job of parents providing healthy foods so much harder. The previous researchers have suggested substantial tightening of the regulations on marketing to children [17]. Their main strategies at the moment include offering more healthy choices; promoting their less obesogenic foods; running their own health promotion activities including physical activities etc; reviewing and altering the composition and portion sizes of products. At this stage, it is very difficult to discern how much of this activity is effective in making a good public relations or good public [18].

**Obesity Prevention at Global Level**

Trade agreements, agricultural subside and tariffs, and other agricultural policies and regulations, greatly influence the food supply of countries. Countries with a heavy reliance on imported foods, such as Pacific Island nations, are even more at the mercy of these economic drivers. High-fat products have been exported to the Pacific countries for many years from New Zealand and United States. Attempts by these island nations to restrict these imports is met with opposition from the exporting countries, and as the Pacific countries move to accede to the World Trade Organization, any such trade-restrictive practices and frowned upon [19].

As with agriculture, there are increasingly transitional regulations on foods such as labeling, claims, definitions and fortification. Many of these have an impact on food purchasing and therefore nutrient and energy intake. The food industries will generally oppose regulations that may put their food products in a bad light to
consumers. The national and transitional regulatory authorities have to continually weigh up the pros and cons of new regulations in the population’s interest. Transitional regulations on food and marketing [20]

**Conclusion & Recommendations**

Obesity prevention research and action is poised to expand enormously over the next twenty years in an effort to alternate, then turn around, the rising epidemic that is effecting almost every country. Whole-of-community projects that are able to achieve a high dose of intervention and can be sustained over time will provide the evidence about what works and what does not work at a community level. Research will hopefully become more solutions-oriented and work closely with stakeholders to fill the knowledge gaps so that obesity prevention actions can be an evidence-based as possible. There will need to be improvements in modeling methodologies to estimate population impacts and cost-effectiveness until empirical data can provide clearer answers. At national level, there should be ongoing funding of programs and policy changes to promote the healthy choices, but to ensure this sustained level of funding and political support, advocacy groups will need to remain active and effective. Policies that promote healthy environments and healthy choices will be the most sustainable actions that a government can create, but many of these will face stiff opposition from the food and advertising industries. It is likely that in the future, the targeting of children to market foods that are known to be obesogenic will be considered unethical, and that over time, such marketing will be reduced by the food and advertising industries’ own actions or (more likely) by government regulations. The transitional reforms needed to promote a healthier food supply and reduce marketing to children are probably going to take a longer time because of the huge economic and political investments in the status quo and the sheer inertia of these large, complex issues.

**References**


