

Practicability of Implementing a Pilot School Based Obesity Prevention Program

Nahlaa Abdelwahab Khalifa, King Abdulaziz University, Saudi Arabia

ABSTRACT

Unhealthy diet and lifestyle behaviours are known to increase the risk of obesity and comorbidities. This article piloted the practicability of a school-based prevention program to control weight among schoolgirls. An eight-week comprehensive program was conducted on 66 adolescent females. Food habits and lifestyle survey was completed. Student health, nutrition, and physical activity knowledge was assessed. Physical education was applied. Subjective assessment of food/beverages at the school's canteen occurred and a sample of a healthy canteen was provided. Results showed students' unhealthy patterns in food habits and lifestyle. Significant changes were noticed in their overall positive responses to pre-and post-questions (P -value=001). Nearly 70% of food/beverage items were categorised as less healthy. School-based obesity prevention programs could support students in improving their eating patterns and weight status. The program could be replicated to improve students' lives in other locations. Benefits could include health and education ministries.

KEYWORDS

Adolescents, Diet, Food Habits, Lifestyle, Obesity, Physical Activity, Prevention, Schools' Canteen

INTRODUCTION

It is well founded that risk factors such as an unhealthy diet and lifestyle behaviors are known to increase the risk of obesity and related diseases (Al-Hazaa, Abahussain, Sobayel, Qahwaji & Musaiger, 2012). Most of these factors are related to poor knowledge, attitudes, and behaviors; thus, the active method of prevention is seen as the most affordable and sustainable action to deal with the risk of obesity (WHO, 2006). Evidence confirmed that prevention programs that are school-based with limited resources could support students to improve their eating patterns and enhance their performance for physical activity (PA), which helps students reach their ideal body weight and thus will allow schools to become an integral part of the competition against obesity prevalence (Kohl & Cook, 2013).

This study is part of a school-based program that was conducted to address factors that could impact the weight status of intermediate schoolgirls at individual and environmental levels. The presented work is a prevention program targeting the school's physical environment in Jeddah city, Saudi Arabia to control students' weight status through physical education and activity.

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BACKGROUND

Obesity is a major public health issue and its incidence has reached an epidemic level in both developed and developing countries (Williams, Mesidor, Winters, Dubbert & Wyatt, 2015). In Gulf countries, obesity has arisen as ever-growing challenges leading to disturbing health problems (Al Nohair, 2014; Shaikh, Sharaf, Shehzad, Shoukat, Naeem, Al Harbi, Almutairi, Al Ilaj & Motairi, 2016). Among children and adolescents in the Gulf area, obesity prevalence ranges from 3% to 18% in young females and from 5% to 14% in males (Badran & Laher, 2011). Concern and importance are raised as for the warning increase in weight pick up among youthful Saudi nationals attribute to poor dietary patterns and inactive lifestyles within recent years (Mabry, Koohsari, Bull, & Owen, 2016). With the obvious nutritional alterations and fast urbanization in Saudi Arabia, it was estimated that 10.6% and 26.6% of adolescents aged 13–18 years are obese, or overweight respectively (Must & Anderson, 2003). In Saudi Arabia, it has been found that obesity prevalence between adolescents rise significantly from 1988 to 2005 (Peplow, Adams, & Young, 2015).

Adolescent females in Saudi Arabia adapt unhealthy eating behaviours and habits for different reasons, such as taste and convenience, where they consume fast foods, “at least once a week” (AlFaris, Al-Tamimi, Al-Jobair, & Al-Shwaiyat, 2015). Saudi adolescents consume less milk, skip breakfast, sleep for long periods of time during vacations, and do not exercise regularly (Farghaly, Ghazali, Al-Wabel, Sadek, & Abbag, 2007; Al-Oboudi, 2010).

Sedentary activities such as sitting down to eating or talking to friends at school breaks are prevalent among 41% of Saudi students (Aljaaly, 2016). A previous national study noted that there was an inverse correlation between Physical Activity (PA) and body mass index (BMI) (El-Kholy & Elsayed, 2015). The PA and physical education (PE) at girls’ schools are commonly ruled out of public school schedules, while it is still permissible for one to two hours weekly in self-governing schools. PE at girls’ public schools is included in some courses and not in a separate curriculum course (Al Jaaly, 2012). It is obvious that early health education programs in addition to healthy school environments can enhance student learning and improve outcomes (Berry, 2002) and hence, it is recommended that to achieve those goals, an increase of attention to the humanities and social sciences in the curriculum is needed.

School health departments at girls’ public schools have previously supported and provided some nutrition programs such as the Dates & Milk program (Yahya, Gordon, & Caine-Bish, 2019). However, no opportunities for PA and PE programs were previously provided because the schools were influenced by national policies, which used to ban these programs in girls’ schools (Aljaaly, 2016). However, in July 2017, the government introduced a reform that worked towards its Saudi vision for 2030, which allowed girls at public schools to participate in PA in the academic years 2017 and 2018. The reform itself did not specify what kind of activities were to be included, but stated that all activities would be in compliance with Sharia rules in commitment to modest Islamic dress during exercise (Moukhallati, 2017) and thus, establishing PE classes across all girls’ public schools will be a big challenge for the Saudi Ministry of Education (MoE). Some conducted programs for adolescents confirmed a positive effect on food patterns, and a good example of it is conducting food literacy programs (Brooks & Begley, 2014).

While most schools have non operated large areas (based on national rules), providing schools with sports facilities and preparing large areas for outdoor activities to practice PA for female children and adolescents is now a must (Aljaaly, 2012). In Saudi girls’ schools, 67% of the accessed meal and snack options are high in saturated fat, salt, and sugar (HFSS) (Al-Jaaly, Khalifa, & Badreldin, 2016).

Obesity increase is likely to create a great public health load (Monteiro, Conde, Lu & Popkin, 2004) as obesity in adolescents and children is intensely related to many comorbidities (Barlow, 2007; Must, Anderson, 2003). Metabolic problems related to childhood obesity raise early cardiovascular disease and type 2-diabetes risk (Nathan & Moran, 2008). Moreover, adolescence obesity was shown to associate significantly with increased risk of severe adulthood obesity (Suchindran, North, Popkin

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