

The Importance of Physical Activity in Obesity

Literature Review

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## **The Importance of Physical Activity in Obesity**

This literature review will examine the importance of physical activity in the health of obese individuals. Obesity is one of the most common comorbidities throughout the United States (CDC, 2020). The disease's prevalence has grown from 30.5% to 42.4% in the last couple of decades (CDC, 2020). According to the World Health Organization, obesity has more than doubled in prevalence since 1975. It is now a global problem with 1.4 billion individuals overweight and another 600 million obese (WHO, 2016). Being overweight alone puts an individual at a higher risk for comorbidities that include, but are not limited to – heart disease, type 2 diabetes, and stroke (CDC, 2020). With the statistics from the CDC and WHO, the increasing numbers of overweight and obese individuals worldwide are becoming a bigger problem every year. Obesity is a disease that can be managed and prevented, along with its comorbidities through physical activity. Increasing physical activity through the promotion of exercise has a lot of benefits with weight management. Let us see the effects of physical activity on children who are overweight and obese.

### **Physical Activity and Physical Competence in Overweight and Obese Children: An Intervention Study**

The primary purpose is to evaluate how physical activity interventions affect obese and overweight school-aged children. The critical question that the authors of the study are addressing is: does physical activity and physical competence have any effect on a school-age child's overall health and well-being? The study consisted of sixty-four overweight or obese school-age children between 10 to 12 years old, who participated in a 7-month after school program (Morano et al., 2020). Of the 64 participants, 35 were in

the intervention group that went through the exercise regimen; 29 were part of the control group that only had their physical education class as their primary physical activity (Morano et al., 2020). The 35 participants who were the intervention group were assigned a multicomponent program focused on health-related motor activities, exercise training, and behavioral management skills (Morano et al., 2020).

The most crucial information in this article is that physical activity and increased physical competency positively affect developing healthy physical habits in school-age children (Morano et al., 2020). Children who participated in the exercise programs showed a positive outcome in physical abilities and self-perception (Morano et al., 2020). The increase in self-confidence in physical activities suggested that young people promoted physical activity (Morano et al., 2020). An increase in physical competence and physical activity not only have a positive outcome in physical abilities, but it also has a positive effect on a child's psychosocial and behavioral health.

If we take this line of reasoning seriously, the worldwide epidemic of obesity will decrease and affect controlling the comorbidities related to obesity (CDC, 2020). Preventing obesity through the schooling system and physical competency, children of our societies will grow up with proper education of healthy physical habits that will keep them healthy throughout their adult lives. Furthermore, minimizing childhood obesity in schools can be done by educating children with a comprehensive healthy lifestyle program that consists of physical, psychosocial, and behavioral factors (Morano et al., 2020).

On the other hand, failure to educate children with healthy physical habits may lead to a significant increase in the prevalence of obesity (Morano et al., 2020). The

disease rate will continue to rise without prioritizing interventions (CDC, 2020). The majority of obesity decreased with increased household head education among children and adolescents (CDC, 2020).

### **Key Points**

The key concept we need to understand in this article is how increased physical activity can affect children's health when it is prioritized and guided properly (Morano et al., 2020). Obesity has become a worldwide issue due to the decline of fitness in school-aged children. The importance of interventions for promoting physical activity and healthy habits has never been more critical (Morano et al., 2020). Due to increased obesity in children, obese children are usually less physically active than their non-obese peers (Morano et al., 2020). The reason being is due to the self-perception of these children believing that they are less capable of physical activities than their non-obese peers.

### **Assumptions**

The primary assumption underlying the authors' thinking is that clinical-family interaction is just as important as educating children in school systems about physical activity and competency (Morano et al., 2020). The families of the children need to have physical competency when it comes to developing children. Children in their families mirror family members' physical health habits, making it one of the key elements when designing or implementing a school-based program intervention to reduce obesity in children (Morano et al., 2020).

### **Deficit/Conclusion**

The article's main inferences are that physical activity and competency are just as important as any other part of education in schools for children. Implementing exciting and engaging exercise programs tailored to children's interest has a higher success rate in keeping children interested in participating (Morano et al., 2020). Starting at a low-moderate intensity of physical activity amongst overweight and obese children and gradually increasing the amount of activity showed the most promising results in the education system (Morano et al., 2020). The study also mentioned a positive correlation between perception of physical abilities and physical activity in the intervention group that suggests that the increase in confidence can promote physical activity in adolescents (Morano et al., 2020). For school-age children, intense, rigorous "workouts" do not work as efficiently as fun and engaging activities. Friendly and non-competitive activities that are enjoyable and focused on mastering skills encourage a supportive environment that increased self-esteem and competence (Morano et al., 2020). Overall, the statistics showed an increase in the intervention group's physical abilities compared to the control group (Morano et al., 2020). In school-age children, promoting healthy physical habits will benefit them throughout their adult life and lower their risks for developing obesity alongside other health problems.

### **Association between Physical Activity and Obesity with Diabetes Mellitus in Indonesia**

The article's primary focus is to determine the relationship between physical activity and Obesity in individuals with diabetes mellitus. The critical question that the

author is addressing is: does the lack of physical activity show a greater risk for developing diabetes mellitus in obese individuals? The study included 5,260 individuals aged 18 years and older, from 13 different provinces in Indonesia (Martina & Adisasmita, 2019). Obesity and physical activity were the study's leading risk factors while considering other variables such as age, sex, education levels, and marital status (Martina & Adisasmita, 2019). Physical activity ranged from all parts of daily living to sufficient training (Martina & Adisasmita, 2019). It is essential to adopt a healthy lifestyle that individuals can stick to daily to ensure they live a long and healthy life.

This article's most crucial information is that the lack of physical activity is a significant risk factor for developing a chronic disease like Obesity, resulting in developing diabetes (Martina & Adisasmita, 2019). Lack of physical activity in obese individuals increased their risk of developing diabetes mellitus by 10% compared to obese individuals who adopted good physical activity habits (Martina & Adisasmita, 2019). Regular physical activity can decrease the prevalence of developing cardiovascular diseases related to Obesity and diabetes, like atherosclerosis (Capriotti & Frizzell, 2016).

If we take this line of reasoning seriously, the prevalence of diabetes mellitus will decrease significantly. Regular exercise can prevent the development of obesity and type-2 diabetes mellitus (Martina & Adisasmita, 2019). Consistency in managing Obesity showed a strong correlation with delaying prediabetes development into type 2 diabetes (Martina & Adisasmita, 2019). If we don't take this line of reasoning seriously, the worldwide increase in Obesity and its comorbidities like diabetes will consistently increase (WHO, 2016). Most overweight parents did not consider their children to be

overweight, indicating poor communication from medical professionals (Vitrup & McClure, 2018). Citizens of communities will be misinformed about obesity and its management, which will ultimately result in misinformed children.

### **Key Points**

The key concept we need to understand from this article is how adopting healthy physical activity habits in obese individuals can decrease the prevalence of diabetes mellitus (Martina & Adisasmita, 2019). Obese individuals have a 2.7 times greater risk of developing diabetes mellitus than individuals who were not obese (Martina & Adisasmita, 2019). Physical activity to maintain a healthy lifestyle and a beneficial weight help prevent Obesity and diabetes, and it also helps prevent many diseases.

### **Assumptions**

The primary assumption underlying the author's thinking is that physical activity plays a critical role in managing weight and helping prevent or manage diabetes mellitus (Martina & Adisasmita, 2019). Physical activity aids in glucose recovery - how the muscle takes glucose from the bloodstream, resulting in better glucose control. Better glucose control results in the ideal management of glucose in prediabetes and diabetes mellitus. Adequate physical activity leads to lower blood glucose levels in diabetes mellitus and helps prevent Obesity (Martina & Adisasmita, 2019).

### **Deficit/Conclusion**

The article's main inferences are increasing physical activity helps regulate blood glucose levels in obese individuals that help prevent or manage diabetes mellitus (Martina & Adisasmita, 2019). Physical activity also reduces cardiovascular risk factors and increases the overall well-being of obese individuals (Martina & Adisasmita, 2019).

To ensure that individuals can manage their weight and prevent or manage diabetes, a healthy amount of physical activity has many benefits. With the obesity rates increasing year after year, nonpharmacological interventions only go so far. Prevention is the best intervention, and preparation is the best precaution (Capriotti & Frizzell, 2016).

### **Prevalence and Association of Physical Activity with Obesity: An Urban, Community-Based, Cross-Sectional Study**

The article's primary purpose is to study the amount of physical activity in obese individuals and their association in an urban population (Singh et al., 2016). The study consisted of 1,047 individuals between the ages of 25 to 64 years old from a central industrial town in Northern India (Singh et al., 2016). The researchers compared the height and weight with waist circumference and waist to hip ratio. The results found that more than half of the sampled population lived a sedentary life, increasing the prevalence of Obesity (Singh et al., 2016). Moreover, the data showed that Obesity was more prevalent in females (58.9%) compared to males (53.5%) (Singh et al., 2016). Additionally, the prevalence of Obesity in both sexes increased significantly between 45 to 54 years (Singh et al., 2016). The data interpretation suggests that the majority of Obesity is considerably lower in younger individuals than older individuals.

The most crucial information in the article is that adequate physical activity levels should be implemented to combat Obesity (Singh et al., 2016). Obesity in older individuals is significantly higher than younger individuals. A study from Poland in 2018 reported that regular exercise's long-term habit positively influenced weight control,

cardiovascular disease, and type 2 diabetes among teenagers (Glinkowska & Glinkowski, 2018).

If we take this line of reasoning seriously, the prevalence of comorbidities due to Obesity and lack of physical activity will decrease over time. Regular exercise will reduce health risks related to Obesity (Singh et al., 2016). If we don't take this line of reasoning seriously, the prevalence of obesity-related diseases will continue to increase worldwide. More illnesses related to the cardiovascular system, skeletal system, and endocrine system will increase in rates (Hinkle & Cheever, 2018).

### **Key Points**

We need to understand from this article that physical activity is an essential component in long-term weight control. Weight control has many benefits that include but is not limited to: decreased risk for cardiovascular disease like hypertension, osteoporosis, type 2 diabetes, nonalcoholic fatty liver disease (Hinkle & Cheever, 2018).

### **Assumptions**

The primary assumption underlying the author's thinking is that sedentary behaviors are significantly associated with Obesity (Singh et al., 2016). The article's main focus was to educate about the benefits of habitual physical activity in the long-term management of fat accumulation (Singh et al., 2016).

### **Deficit/Conclusion**

The main inferences are that sedentary lifestyles have been the everyday habits of the majority of the population. The increasing obesity rates have not slowed down but doubled in the last couple of decades (WHO, 2016). The growing prevalence of the

obesity-related disease will continue to rise if the pandemic is not resolved (Singh et al., 2016). Regular exercise is an essential component in battling the obesity pandemic.

### **Conclusion**

The prevalence of many diseases related to Obesity is increasing worldwide due to poor health choices and the lack of regular exercise in daily living. Education about healthy lifestyle choices has become an uncommon practice (Vittrup & McClure, 2018). Parents are misinformed about proper eating and exercise habits, which results in misinformed children (Vittrup & McClure, 2018). Caring for and educating patients about their weight and exercise habits vary with different cultures and ethnicities (Hogan-Quigley et al., 2017). Hispanics and nonhispanic blacks have a higher prevalence than nonhispanic- whites for developing obesity (ASMBS, 2018). Around 80% of people with type 2 diabetes and hypertension are obese, with less than half of them being advised to lose weight (Hogan-Quigley et al., 2017). If the main goal is to decrease the increasing rate of Obesity worldwide, better awareness, and more accurate information are necessary. Medical professionals need to be more aware of educating their patients about obesity, and its comorbidities. Our communities need to treat obesity as a priority. Decreasing the prevalence of Obesity can be done with one simple step at a time.

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