

The Impact of Healthy Habit Promotion to Elementary Aged Children

Senior Project

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Abstract

There is much information on the topic of the importance of health and physical activity in children. However, there is little information about how schools, specifically elementary schools, are ensuring children receive adequate amounts of physical activity, health, and illness prevention education. This research paper investigates how elementary schools are prioritizing the health of children throughout the school day, specifically looking at physical health promotion, illness prevention techniques, and applied programs in elementary schools.

**The Impact of Healthy Habit Promotion to Elementary Aged Children**

**Introduction**

Children are often deemed as healthy, despite their actual health and wellbeing. When we hear the word healthy, we often think of being free from illness or injury, but many do not consider the full definition, which can be described as “all aspects of physical, psychological, cognitive, and social functioning” (National Research Council, 2004). Many also do not realize how impactful a child’s current health status is on their future development. While it is normal for children to develop illnesses throughout their life, there are some illnesses that can be extremely detrimental to a child’s development and future such as obesity, diabetes, respiratory syncytial virus (RSV), asthma, whooping cough, and even cardiac conditions. More common illnesses children are likely to develop are influenza and Covid-19.

The risk of illness development in a child greatly increases in school systems, especially in elementary schools, due to an increased amount of contact with students and teachers, and their underdeveloped immune system (Centers for Disease Control and Prevention, 2022). Due to a child’s increased risk, it is important to implement both physical activity and illness prevention techniques in elementary school settings in order to improve children’s health and development. Elementary schools all over the world have considered how important a child’s health is, leading elementary schools to implement more health-focused programs and activities into everyday education, such as increased recess times, health education, hand hygiene, and school health programs.

**Physical Health Promotion**

Physical activity promotes health and fitness in children. It is proven that children who partake in physical activity on a regular basis have improved cardiorespiratory fitness, stronger muscles, and bones, are less likely to be obese, have improved coordination and balance, and improved fine motor skills (Centers for Disease Control and Prevention, 2022). Active children also decrease their risk of developing serious conditions that come along with age, such as osteoporosis, diabetes mellitus type 2, heart disease, certain cancers, and hypertension. McKenzie and Kahan (2008) describes physical activity as “the process of engaging in bodily movement that results in energy expenditure, and it is essential for good health”. But, in recent years physical inactivity in children has become a growing concern, especially with the development and enhancement of video games, internet, and television. Childhood obesity has nearly tripled since the 1970s, making children more likely to be obese in adulthood, along with increasing their risk of developing diabetes, cardiovascular disease, and cancer (McKenzie and Kahan, 2008). This has greatly concerned school systems, causing them to promote physical activity in their students. It is recommended that children participate in at least 60 minutes of physical activity per day, but schools primarily focus on cognitive outcomes of students, repressing physical activity in the school day (McKenzie and Kahan, 2008). In order to correct this issue, classroom teachers and physical education specialists have implemented health-related curriculums into their classroom times. This can account for a portion of the children's daily physical activity, but other measures are needed. Other ways elementary schools have implemented physical activity is recess time, which provides children with additional educational and developmental benefits, such as sharing, communication skills, etc. (McKenzie and Kahan, 2008). According to McKenzie and Kahan (2008), the School Health Policies and Programs Study is a national survey that is repeated to assess school policies and programs related to children’s health. In 2000, the survey found that 8% of schools provided daily physical education, and only 71.4% of elementary schools provided regularly schedules recess for K5 students. Recess accounts for most of the amount of physical activity children need in a day’s times, making it a critical component of their school day. Other opportunities for physical activity in schools exist through intramural sports, organized dances, noncompetitive activity clubs, leisure time activities, or play days with other schools (McKenzie and Kahan, 2008).

For a child to understand what it means to be healthy; it is imperative for schools in incorporate health education. It is believed that classroom teachers and health and physical educators should collaborate to teach the importance of health to elementary students. In Virginia, educators have done just that. First grade students were to identify basic components of the human body through simple activities such as “head, shoulders, knees, and toes” and functions of safe practices, relationships, and environmental health (Rosche and Lucas, 2021). Third grade students were to identify whole grain food items and learn how to demonstrate a variety of skills such as the over hand throw. This was completed by having students master the eye on the target, side orientation, stepping while throwing, rotating, releasing the ball, and following through (Rosche and Lucus, 2021).

**Illness Prevention Techniques**

Highly infectious illnesses tend to spread quickly in school settings, such as the common cold, stomach bug, or influenza, due to elementary children’s undeveloped immune systems, causing students to be absent from school and miss out on important curriculum. A systematic review was completed by Willmott et al. (2015) to summarize the effectiveness of hand hygiene interventions in reducing illness and absenteeism in children ages 3 – 11. Hand hygiene techniques studied included hand washing with soap and hand sanitizer and illnesses were based upon respiratory tract (RT) and gastrointestinal tract (GT) infections. Willmott et al. (2015) discovered that five studies reported a reduction in the number of RT infection symptoms with the use of hand hygiene techniques; of the five, three reported RT symptoms. One study found a reduction in rhinitis and cough symptoms, one recorded reduction in rhinorrhea, the other found no change in cough symptoms. Two studies reported GI infections, with only one recording a reduction of symptoms and infection after hand hygiene measures. Two studies recording lab results noted a decrease in influenza-like illnesses. Four out of five studies reported positive behavior changes in relation to intervention techniques and all five studies reported positive changes in both student and staff’s attitudes, knowledge, and beliefs of hand hygiene techniques. With their results, Willmott et al. (2015) was able to conclude that hand hygiene interventions of children 3 – 11 years old in the elementary school setting noted reduction in absenteeism, occurrence of RT infection and symptoms, and confirmed influenza-like illnesses, while improving attitudes, knowledge, and behavior. The occurrence of GI infection and symptoms noted a counterbalance with the use of hand hygiene techniques, indicating neither an increase or decrease in GI incidence.

Before the Covid-19 pandemic, the pandemic of the H1N1 2009 influenza virus greatly impacted elementary school systems. Since the influenza pandemic, illness prevention techniques that are implemented in school systems includes social distancing, hand hygiene, the optional use of facemasks, vaccines, and antiviral supplies (Allison et al. 2010). Allison et al. (2010) conducted a study measuring acceptability of, adherence with, and barriers associated with the use of non-pharmaceutical interventions, such as hand gels and facemasks, in elementary schools over two, 2-week periods. The first two weeks utilized the use of hand gel and face mask use was recommended for the second two weeks. The study was conducted in two K-6 elementary schools in Utah. During the first phase of the study, hand gel use was encouraged for two weeks and approximately four times a day, and teachers were asked to measure the acceptability, adherence, and describe barriers encountered while using hand gels. While measuring acceptability, researchers found that only 15% of teachers found hand gel use disruptive during the first week of use, but declined to only 6% during the second week of use. During week one of use, 95% of teachers stated they would use again next winter, and 100% of teachers would use during a pandemic. During the second week of use 94% of teachers stated they would use hand gels again next winter, and 94% also stated they would use hand gels during a pandemic. While measuring adherence, researchers found that during the first week of hand gel use 70% of teachers reported their students used hand gel more than 4 times throughout the school day, and during the second week, that number increased to 76%. The barriers teachers faced in response to the use of hand gels in the classroom was they served as a distraction. Specifically, students would use their individual bottles to play with during class time, making wall dispensers more ideal for classroom use (Allison et al. 2010).

 The results for face mask use during the second two-week period had contrasting results in comparison to hand gel use. During the first week, 65% of teachers stated that facemasks served as a distraction during classroom times; that number decreased to 57% during the second week of facemask use. Only 29% of teachers during the first week of use stated they would use facemasks again next weekend; that number increased to 43% during the second week of facemask use. During the first week of use, 94% of teachers states they would use facemask again during a pandemic and 100% of teachers reported they would use again during a pandemic during the second week of use. While measuring adherence, during the first week of facemask use, only 59% of teachers reported that greater than 50% of their class wore facemasks throughout the school day; this number decreased to 29% during the second week of facemask use (Allison et al. 2010) Teachers also reported that the use of facemasks generated a distraction to students and produced physical discomfort to both students and teachers. Facemask use also hindered students and teachers from reading and observing others facial expressions, which they indicated was an important part of communication in the elementary school setting (Allison et al. 2010). The results associated with hand gels had a high acceptability and adherence rate; facemasks displayed low numbers with few students and teachers wearing facemasks, but would wear mask in a classroom during a pandemic.

**Applied Elementary School Programs**

 Children spend a large portion if their day at school, making school an ideal environment to promote healthy lifestyles. Campbell et al. (2012) discusses the school program, Health BuddiesTM, based in British Columbia. The program is a teacher guided and student led health promotion program, that teaches elementary school children how to live a healthier life. This is accomplished by providing student grade 4 – 7 with a healthy living lesson from a teacher; students then go on to teach their younger “buddies” in K-3 grades how to live a healthier life. A healthy life is taught by encouraging positive attitudes and behaviors towards physical activity, nutrition, and body image (Campbell et al. 2012). The program found that K-3 students who participated in the health buddies program experienced slower increases in their systolic blood pressure and 4th – 7th grade students experienced slower increases in their body mass index (Campbell et al. 2012).

**Conclusion**

We can gather the importance of physical health in elementary aged children and illness prevention techniques that are implemented in elementary schools. McKenzie and Kahan (2008) described the importance of physical activity in children, along with the methods elementary schools are taking and need to take in order to meet a child’s daily physical activity needs. Rosche and Lucus (2021) described the importance of health education and how Virginia schools implemented health education to elementary students in the classroom. Willmott et al. (2015) performed a meta-analysis on the effectiveness of hand hygiene in elementary schools and found that the use of hand hygiene techniques was beneficial in the reduction and prevention of respiratory infections and absenteeism. Allison et al. (2010) performed a study measuring the acceptability and adherence of hand gel use and facemasks, and concluded that hand gels had a high acceptability and adherence rate. Campbell et al. (2012) found that the Health BuddiesTM program was a success in promoting healthier lifestyles in elementary school children through a teacher and peer-led health education program. It has been proven that many educational settings are trying to improve health education and physical activity levels in elementary school children for their current and future health status, but there are still many changes that need to be made. The health of children should continue to remain a priority in elementary school settings.

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