

THE IMPACT OF MINOR CHANGES IN INSTRUCTION ON STUDENT LEARNING

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Abstract

Childhood obesity is a growing concern, with the percentage of children and adolescents who are obese increasing from 7% to 18% in the United States between 1980 and 2010. Physical activity is a key component in the promotion and maintenance of a healthy lifestyle, and can help to reduce childhood obesity. Physical education is an ideal setting for promoting physical activity, but it is important to ensure that physical education programs are designed in a holistic way that meets the needs of all students.

Keywords: Childhood obesity, Physical activity, Physical education, Holistic approach, Obesity prevention strategies

1. Introduction

It is well known from popular media that obesity rates in children and adolescents have been a concern for many years. According to the Center for Disease Control the percentage of children aged 6–11 years in the United States who were obese increased from 7% in 1980 to nearly 18% in 2010. Similarly, the percentage of adolescents aged 12–19 years who were obese increased from 5% to 18% over the same period (Center of Disease Control and Prevention, 2013). The IOM (2013) has stated that less than half of the youth meet the required 60 minutes of physical activity per day and this lack of energy expenditure results in sedentary behaviors which is strongly linked to childhood obesity.

Physical activity is viewed as a key component in the promotion and maintaining of a physically healthy lifestyle (McKenzie et al. 1996).

Participation in physical activity serves as a way to strength bone mass; reduce cholesterol and blood pressure which aids in the reduction of childhood obesity (Riddoch, 1998).

With the recent concerns of the weight status of children there has been several claims of how and why physical education should join in the fight against obesity (Sallis & McKenzie, 1991). The physical education setting is a perfect avenue for not only teaching motor competence and skill but its acts as an opportunity to promote physical activity during the school day (Siedentop, 1994). Physical education should include teaching to the student in a holistic way, but it can be questioned whether or not this is being done. Professionals in the field understand the benefits of physical activity and how physical education can be a portal for expanding a child's knowledge and likelihood of participation in physical activity (Sallis & McKenzie, 1991).

However, it must be taken into consideration whether or not the children being educated really understand the importance (Spencer-Cavaliere & Rintoul, 2012). For some students a major component to the aversion of physical education is the fear of being left out, and they are being alienated because of this (Carlson, 1995). The students who are overweight and considered obese are being ostracized and alienated due to their inability to perform at the level other students can (Southall, Okely, & Steele, 2004). We have seen this situation numerous times in movies, narratives in research, and for some of us, first hand in the physical education settings.

Teachers must take caution to show interest in each individual student, and to not maintain their focus on only highly skilled students. As a teacher, one should be motivated to help each kid no matter their ability level or appearance.

When certified physical educators were asked if the schools were doing enough to combat obesity, 80% of them felt as though the schools were not (Greenleaf and Weiller, 2005). Physical educators must become part of a solution that begins by creating a nurturing environment that protects a child's self-esteem. Current research should drive professionals in the field to examine their methodology to determine to what extent physical activity is being positively promoted or, conversely, the role that educators and other experts are playing as catalysts in the growth of obesity.

What Does the Research Tell Us

A study conducted by Meaney, Hart, and Griffin (2011) examined overweight participants' attitudes toward physical activity and how they perceived their physical education classes. The BACTIVE program uses mastery motivational climate (MMC) to foster a sense of success and accomplishment. The purpose was to create positive self-efficacy in these individuals. Throughout this study the finding showed that overweight student's perceptions were impacted by factors within the instruction environment (Meaney, Hart, and Griffin, 2011). Participants in the BACTIVE program enjoyed it. They were among peers of the same weight and situation so they felt more at ease. One participant responded that she felt like she belonged and another participant said that kids weren't mean to me here like they are in my physical education class (Meaney, Hart, and Griffin, 2011).

These students built a strong social support with their peers and they were able to feel less anxiety about participating in physical activities. Students were asked how their physical education class could be changed in order to promote involvement. Almost all of the students commented on how the class was programmed, by stating that they only play one type of activity and that activity usually last for a week which resulted in boredom. Students advocated for more variety in activities. Classroom management appeared to be a common theme as well. Students emphasized that the majority of their time in physical education class was spent on management and sitting in their designated areas, which only left about 5 minutes of actual activity time (Meaney, Hart, and Griffin, 2011). Along with bad management, disciplinary problems affected the whole class and their opportunity to engage in activities. If one student was to act up then all the students would suffer. These inappropriate teaching behaviors promote student's inactivity.

A research study conducted by Trout and Graber (2009) revealed students ranged from enjoyment to hatred when it came to how they categorized their physical education experience. This study used interviews tied to the learned helplessness framework to see exactly how overweight students perceived physical education. Several main contributors to negative perceptions were highlighted, with one significantly contributing factor identifies as the desire to become invisible. A majority of these students did not pose the motivation to achieve in the physical education classes due to their low self-efficacy and the fact that they were continuously spotlighted because of their inability to perform. In certain activities such as fitness testing, several students were made fun of because their inability to do well on the running test made it easy to see them fail because they were the first ones out or the last ones to finish. The public humiliation for most students whether they are overweight or unable to successfully complete a task is too much to handle.

The culmination of these factors resulted in students being "competent bystanders." A competent bystander is a student in a physical education class that is familiar with the structure of the task at hand and is able to avoid participation. Students will move to the back of the line when they know they will not be noticed so that they do not have to perform in front of others (Tousignant & Siedentop, 1983). In the instance where a student has to perform on a fitness test, a handful of participants in this study stated they tried to miss that day of school by acting sick or employing some other tactic. One student reported that on a mile run day, if he walked at any time

during the run, the teacher would punish his classmates by making them run more. Subsequently, his classmates alienated him for his failure and blamed him for their extra running (Trout & Graber, 2009).

While research studies give insight into the world through the eyes of overweight students, an important question is, “how can physical education teachers use this research to improve learning experienced for overweight students?” Some research suggests that teachers may not be fully aware of how to teach fitness and therefore are unable to modify tasks to suit overweight students (Trout and Graber, 2009). Other studies suggest that if students are allowed to sit out and not participate then they are more likely to find physical activity less important and will not engage in physical activity outside of school (Meaney, Hart, and Griffin, 2011).

What Can Physical Educators Do

Through examining research on the perceptions of overweight children in physical education, one major theme stands out; inappropriate teaching practices are present in physical education classrooms. The National Association for Sport and Physical Education (NASPE) provides educators with guidelines for appropriate instructional practices at all levels K-12. Neglecting these practices can breed a negative environment for overweight or obese children. In order to create a more positive experience for all students’ teachers can look at the guidelines as a compass. When creating lessons a teacher needs to take into consideration all of their students. This seems like common sense but it is not always done. Should overweight students be expected to perform at the same level as normal weight students? The answer is no. This element needs to be addressed. Teachers may fail to adapt their lessons to tailor to the needs of overweight children due to two factors. First is the notion that if overweight students work as hard as normal weight students then they will benefit more and get more exercise. What is not taken into consideration is their current level of fitness. An overweight child may suffer from breathing problems and other medical concerns that could make being asked to run a mile non-stop an impossible task at their current physical level. The second factor is the teacher’s lack of content knowledge when it comes to fitness. A teacher should be able to modify a student’s task that suits the needs of the student. For example instead of having students simply go out and run a mile the teacher could consider doing interval training. That way all the students are running at their own pace, preferably within their target heart zone. By doing this type of exercise a student can judge their ability and students are required to walk to let their heart rate lower. This makes it harder for students who might be struggling to be noticed (Trout and Graber, 2009).

Instructional strategies such as allowing children to choosing teams can have a negative effect on a child’s willingness to engage in physical activity. A study by Cardinal, Yan, & Cardinal (2013) asked young adults about their physical activity levels and how their previous experience affected their current status. Results indicated that the underlying factor for decline in physical activity as an adult was being picked last for a team. The responses also showed that out of the choices of not being given the opportunity to play and being cut from a particular team had less impact than being chosen last. These types of strategies employed by teachers can impact a student’s more than one would assume. Curriculum plays a major role in how students experience physical education. Due to the competitive nature of traditional physical education classes many overweight children are turned off. Freedom of choice might be an effective avenue for creating enjoyment in physical education.

Research shows that providing noncompetitive opportunities for students who do not wish to participate leads to a reduction of stress and more enjoyment towards physical education (Carlson, 1995). This more automatous environment also contributes to student’s sense of control. Lack of control for an overweight student can stem from their skill level or their perceived motor competence. If an overweight student is in a position where they feel as though they aren’t successful compared to others they will most likely be alienated by others or themselves for fear of failure (Carlson, 1995). A teacher can help elevate some of these experiences by creating developmentally and physically appropriate tasks.

Allowing students to self-pace through activities and setting up small goals within each task you are facilitating small success which will aid in enjoyment and act as a motivation to continue. The teaching of fundamental motor skills is another link to promoting physical activity for a life-time. Williams et al. (2008) showed evidence that children who had higher levels of motor skill performance spent more time in moderate-to-vigorous physical activity compared to the low skilled counterparts. To strengthen the argument that physical education teachers should focus on the acquirement of fundamental motor skills is a systematic review conducted Lubans et al. (2010). Contrary to belief children do not naturally acquire these skills and must be taught how to perform them accurately. Based on the results from the systematic review 21 research articles were found that assessed the effects fundamental motor skills had on health. Not only was fundamental motor skills inversely related to weight status it was strongly associated with a child's physical activity levels. Those children and adolescents who established more fundamental motor skill competence had higher levels of engagement in physical activities.

Students must also be taught to value physical activity. A study by Lee (1997) showed students were more likely to engage and continue to work towards a task they found useful or interesting. If students do not see the value in being physically active then they will more likely to be less motivated to engage in it. In the study by Trout and Graber (2009) most overweight participants perceived many aspects of physical education to be of little or no value overall. It is the teacher's responsibility to present the positive influences that can come from being physically active and the benefits you gain. If students see that a teacher does not value the concepts of health and fitness being taught, then the students may have a difficult time fully grasping the impact being healthy can have on life. The importance of exercise and being outside moving can act as a huge incentive for children, and the concepts taught in lessons should be relatable to the students in some way. This can be done by introducing the effects that exercise has on movements performed in their everyday lives, or by intertwining how exercise can relate to activities they enjoy doing outside of school.

Equity is a key variable in overweight student's involvement in a physical education classroom. As a teacher, it is important to put aside personal bias and reach for the greater good of their students. No matter who the student is, they should receive the same treatment as students viewed to be more proficient. While the outcomes may be different, it is important that each student is held to a high personal standard, appropriate for their personal fitness and skill level. The classroom environment should be created to provide encouragement and support. Students should be taught to see a person for who they are, and not simply judged for their abilities. Some ways that this type of teaching can occur is to apply the simple principle of getting to know the students.

One strategy to gain individual information from students on their personal fitness or skill level is to conduct a survey at the beginning of a new unit. By getting to know the students, educators can modify lessons to involve some elements that each child can be good at. This will foster a sense of accomplishment among all students in the classroom. Another area that needs to be examined is the use of feedback. Research has been done on distribution of teacher feedback that shows boys receive feedback more often than girls and high skilled students receive more feedback than lower skilled (Nicaise et al., 2007).

For overweight students feedback can be an effective extrinsic motivational tool and can result in the use of verbal desists.

Conclusion

Research confirms belief that the act of teaching is complex. Being that a classroom is a constantly fluctuating environment, led by an individual with unique personal experiences and contextualized methods; it is fair to assume that there is more than one right way to accomplish the education of the students. Nevertheless an initial approach by any educator should be to assure that his/her actions and goals are in place to benefit the students. The physical education classroom environment should protect the children from fear of failure, and foster positive attitudes about physical activity.

The teaching strategies employed should seek to have maximal positive effect on the students who come through. As outlined in the research, fighting obesity might seem like a monumental task, and there is much need for a change in the current trends. The physical education classroom is an excellent place to start, but educators need the tools, abilities, and personal interactions with the students necessary to facilitate this change. By believing that each student is capable of achieving success at their own level and pace, creating an environment where these successes and achievable and measureable, and by nurturing concepts that can be extrapolated past physical activity in the classroom, educators can make a difference in stemming the rising rates of obesity. Living healthy and being physically responsible are lifelong challenges. No one teacher can conquer the entire problem on their own, however Mother Teresa might have said it best when she said "I alone cannot change the world, but I can cast a stone across the waters to create many ripples" ("Mother Teresa Quotes," 2013).

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