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EASTERN KENTUCKY UNIVERSITY

Give Me a Break: The Effects of Recess in Rural Elementary Schools

Honors Thesis

Submitted

In Partial Fulfillment

of the

Requirements of HON 420

Spring 2018

By

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Mentor

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Abstract

Give Me a Break: The Effects of Recess in Rural Elementary Schools

Nancy Elaine Allen

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A qualitative descriptive research approach was conducted to determine the effects of recess on rural elementary schools. Counties in Eastern Kentucky are predominantly rural and ranks among the lowest ten-percent of U.S. counties in poverty, income, and unemployment rate. These variables greatly affect the health and occupations of all citizens in this area, but the researcher looked specifically at its impact on elementary students. Principals and teachers in rural eastern Kentucky elementary schools were interviewed using semi-structured interview protocol about their opinions of recess in their schools and on students. Interview data was transcribed verbatim and analyzed for themes. Results suggest four common themes among the participants' remarks about the benefits of recess, the drawbacks of recess, days without recess. and changes to recess. These results suggest that recess is imperative for optimal classroom function in rural eastern Kentucky, that there is room for alterations to the schedules, and additions that could be made to playground equipment at each school.

Keywords and phrases: recess, elementary schools, eastern Kentucky, principal, teacher, honors thesis, qualitative approach

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Chapter One: Background

Background and Need

In the United States, elementary schools are cutting back on recess to promote better test scores and to meet state standards with legislature like No Child Left Behind in 2001 and Common Core in 2009 (Ramstetter & Murray, 2013). Recess does not promote instruction of materials that are required for state testing, such as math and reading, therefore schools have begun reducing recess to add more class time (Burriss & Burriss, 2011). However, research has shown that cutting back on recess has a negative effect on class grades and student behavior, especially in poverty-stricken areas (Milteer, Gingsburg, & Mulligan, 2012). Rural environments that are also economically disadvantaged have an increased number of students that lack opportunities outside of school for physical activity or free expression in a safe environment (London, Westrich, Stokes-Guinan, & McLaughlin, 2015). School is not only the place they come to learn but it also provides safety, positive relationships with adults, and active social engagement with other children their age (London et al., 2015). Many students in rural, low-income areas do not have access to parks or athletic facilities. Transportation after school is often also not accessible to these students from their caregivers. This creates an environment for students where school becomes their best opportunity for routine physical activity and expression with other children their age.

Furthermore, many school principals, who are responsible for the duration and frequency of school recess, use the break in the school day as a disciplinary tool for negative student behavior by taking it away (Ramstetter & Murray, 2013). Childhood obesity rates continue to increase steadily, especially in low-income areas, and the lack of physical activity

opportunities in schools continues to add to the problem (Hyndman, 2015). Research has shown that 17% of children in the United States are obese (Hyndman, 2015). This number has increased steadily over the past several years due to an increase in fast food consumption, especially in areas of high poverty, and there has also been an increase in sedentary occupations such as watching television and playing video games (Hyndman, 2015). Students in these areas are at-risk for future health issues and drop-out rates (Hyndman, 2015). There is a need for understanding the effects of recess in rural, low-income elementary schools so that students can be better assisted to reduce these issues in the future.

Problem Statement

Low-income school districts have obstacles in their schools that negatively impact their students more than those in higher income areas. Many of these low-income schools are dealing with significant budget cuts which then create difficult decisions for administrators on how to disperse their funds (Hyndman, 2015). Research has also shown that 22.6% of schools do not have a gymnasium and that many of those who do have a gym cannot use it for recess purposes which then creates a barrier for most physical activity during inclement weather (Hyndman, 2015). Additionally, issues with absences, illness, and student obesity are significantly higher in underprivileged areas (Hyndman, 2015). These situations can have a negative effect on the academic and behavioral performance of students in low-income schools. Recess is one way these schools can support their students' health and learning but due to increased instruction time schools continue to cut back on recess (Ramstetter & Murray, 2013).

Despite these cutbacks, there are multiple scholarly articles that explore the benefits that recess can provide to students. Ramstetter and Murray (2013) argue that recess provides physical, social, emotional, and academic benefits to students in elementary schools by providing exercise, building friendships, allowing unstructured expression during play, and increasing test scores. Milteer, Gingsburg, & Mulligan (2012) demonstrate the positive impact of recess on overall classroom behavior through their research on the changes observed in students on days with and without recess opportunities. On school days without recess, students were on task significantly less and were considerably more fidgety than on days with recess (Milteer, Gingsburg, & Mulligan, 2012). Furthermore, Harper, Symon, and Frea (2008) explore the benefits of recess on the social interaction between students with and without Autism. Recess allows classrooms that combine students with and without disabilities an opportunity to interact in an unstructured setting without a teacher's guidance. This opportunity increases student interaction and promotes activity in students with disabilities. These sources are vital to the argument for recess in elementary schools, however, there is little known about the effects of recess on rural, low-income students in eastern Kentucky from the views of the principals who make the rules versus the teachers who follow the rules.

Statement of Purpose

The purpose of this descriptive qualitative study is to better understand the perspectives of teachers and principals on the effects of recess on students in rural, low-income elementary schools in eastern Kentucky. A better understanding of these effects from the view of elementary principals and teachers could then help influence the decisions made on recess time for rural, low-income elementary students in the future.

Research question

How do principals and teachers understand recess in rural, low-income elementary schools in eastern Kentucky?

Theory Statement

The researcher used Herbert Spencer's Surplus Energy Theory developed in 1873 (Mellou, 1994). This theory states that play is motivated by a need to release surplus energy (Mellou, 1994). Signs such as fidgeting, restlessness, waning concentration, and general off-task behavior are indications from Spencer that children need a break from work to release their energy (Mellou, 1994). This theory relates to the researcher's study because recess is an opportunity for schools to allow students to exercise, which helps fulfill their need to release surplus energy. The pre-release and post-release of students' energy during recess may be better understood through the researcher's semi-structured interviews of teachers and principals in rural, low-income elementary schools.

Definition of terms

In this research these definitions will be used:

Elementary School: a school including usually the first four to the first eight grades and often kindergarten (Hyndman, 2015).

Principal: the person in charge of a public school (Merriam-Webster Online Dictionary, 2017).

Teacher: one that teaches; especially: one whose occupation is to instruct (Merriam-Webster Online Dictionary, 2017).

Student: one who attends a school (Merriam-Webster Online Dictionary, 2017).

Rural: of or relating to the country and the people who live there instead of the city (Merriam-Webster Online Dictionary, 2017).

Unstructured Play: Children engage in open-ended play that has no specific learning objectives or strategies (Hyndman, 2015).

Structured Play: Activities are instructor-led with directions and rules and it requires strategy and active listening (Hyndman, 2015).

Recess: break in a school day for children to play, usually outside in a playground (Merriam-Webster Online Dictionary, 2017).

Limitations

There were a few limitations to this study. The sample size of five participants was small which only allowed a glimpse of the effects of recess in these rural elementary schools from the perspectives of a few teachers and principals in eastern Kentucky. Eastern Kentucky is a wide-ranging area and the location of the two schools was within fifty miles of one another. This may not allow for an accurate view of the effect of recess in Eastern Kentucky as a whole. Additionally, the researcher only focused their efforts on rural public schools therefore these results cannot be interpreted for rural private schools.

Chapter Two: Literature Review

This literature review will use information found in primary and secondary scholarly sources to examine recess and its effects on rural elementary schools. The topics that are most prevalent in the literature pertaining to recess and rural schools include the benefits of

play, rural barriers on childhood physical activity, the effect of childhood exposure on adult health, gender differences in physical activity, and recess interventions.

Benefits of Play

Recess is a scheduled time during the elementary school day for students to participate in unstructured physical activity and play. The occupation of play has been recognized by the United Nations High Commission for Human Rights as a right for every child due to the cognitive, social, emotional, and physical benefits it can provide (London, Westrich, Stokes-Guinan, & McLaughlin, 2015). The cognitive, social, and emotional aspects of play are utilized as children learn to cooperate with others in games that involve turn-taking, communicate their feelings when there are disagreements, overcome challenges to meet a new goal, and participate creatively (Milteer, Ginsburg, & Mulligan, 2012). The cognitive benefits of play are best observed in school settings where students are taken from prolonged inactivity in the classroom, allowed an opportunity to play during recess, and then returned to class (Ramstetter & Murray, 2013). Data has shown that the abrupt change in activity from class to recess allows children time to release their built-up energy and refocus their attention (Ramstetter & Murray, 2013). It has also been found that children who allowed time for unstructured play in school return to class with reduced rates of fidgeting and increased rates of concentration (Gallotta et al., 2015). This positive change in the demeanor of students who are allowed time to play during the school day is one of the strongest arguments for the inclusion of recess in elementary schools.

Play affects the physical health of children by providing active movement in their day to day lives (Milteer, Ginsburg, & Mulligan, 2012). In the United States, the convenience of

fast food and the increase of sedentary behaviors like playing video games have contributed greatly to the obesity epidemic in recent years (Milteer, Ginsburg, & Mulligan, 2012).

According to the Centers for Disease Control (CDC), one in five school-aged children is obese. Children are not playing outside as much after school as in past generations which also supports the argument for recess in schools. Elementary schools provide an environment that can influence how most of a child's day is spent. Allotting a portion of that time to supervised physical activity and play during recess would allow students an opportunity to move their bodies that they may not take or have outside of school, therefore benefitting the overall health of students across the nation (Milteer, Ginsburg, & Mulligan, 2012).

Rural Barriers on Childhood Physical Activity

Rural areas are faced with barriers that limit their physical activity more than many other environments. As of 2014, more than 46 million people in the United States lived in a rural county (Walsh, Umstatt Meyer, Gamble, Patterson, & Moore, 2017). In these areas, there is a higher prevalence of obesity due to factors like low-income, lack of transportation, fewer facilities, and safety issues. Children in rural counties are 25% more likely to be overweight or obese than children in urban areas (Walsh, Umstatt Meyer, Gamble, Patterson, & Moore, 2017). Lack of transportation becomes an issue for these children because their rural location often puts them out of walking distance to school and they rely heavily on buses to transport them to and from school (Walsh, Umstatt Meyer, Gamble, Patterson, & Moore, 2017). Fewer children walking to school cuts back on opportunities for physical activity during the day and limits the activities they can take part in after school (Walsh, Umstatt Meyer, Gamble, Patterson, & Moore, 2017). When the bus drops students off at their homes after-school they likely will not leave their house until school the next day.

In low-income areas, parents do not have the means to pay for extracurricular activities or the availability of transportation to take their child to a facility to play (Walsh, Umstatted Meyer, Gamble, Patterson, & Moore, 2017). This adds to the increase of sedentary behavior in rural areas and therefore increases the childhood obesity rates as well.

The deficiencies of facilities in rural areas also add to the childhood obesity rates in rural areas. There is a higher prevalence of poverty in rural areas and their distance away from facilities like parks and gymnasiums adds an additional barrier to the ability of children to get enough physical activity during the day (Carlson et al., 2014). These facilities are either out of walking distance or not available at all which also adds to sedentary behaviors in rural children like watching television or playing video games (Carlson et al., 2014). Additionally, the safety in poor communities is an added barrier to physical activity in children. In the past, children could play outside in their neighborhoods after-school and their neighbors would act as extra supervision for the children (Walsh, Umstatted Meyer, Gamble, Patterson, & Moore, 2017). Today, with the increase in drug problems in poor, rural communities many parents urge their children not to go outside without an adult which prevents children from being outside as much as children could be in the past.

The Effect of Childhood Poverty Exposure on Adult Health

There is a lot of data that supports the idea that the difficult experiences of childhood poverty can influence the quality of life in adult years. Children who grow up in poverty are at increased risks of medical issues as adults due to their lack of nutrition and decreased access to physical activity (Wise, 2016). Low-income families rely heavily on fast food products and eat more quick prep meals in bulk such as Ramen Noodles because they are

more affordable than fresh foods like fruits and vegetables (Wise, 2016). The more affordable foods for low-income families are often high in sodium and carbohydrates, and they provide very little nutritional value to consumers. Without proper nutrition, a child's height can be stunted which negatively affects proper bone growth and increases the risk for development of osteoporosis (Wise, 2016).

Poverty also increases the risks of chronic diseases, like diabetes, asthma, and sleep apnea, later in life (Milteer, Ginsburg, & Mulligan, 2012). In addition to poor eating habits, children who grow up in poverty often do not have the means necessary to participate in physical activity outside of recess at their school due to safety issues in their communities like increased crime and drug use. It is also difficult for these children to go to local parks or gymnasiums outside of school because of their family's financial strain and lack of transportation (Wise, 2016). These diseases are often developed because of childhood obesity. Children who eat a diet of unhealthy foods and participate in sedentary behaviors like watching television and using electronic devices are at an increased risk of becoming overweight (Wise, 2016). This pattern will often continue throughout the rest of their lives without wellness interventions in their communities early on in their lives (Wise, 2016).

Gender Differences in Play

When students are offered the opportunity for play during breaks like recess there are differences in how males participate versus females. Research has shown that boys participate in physical activity during recess 39% of the time while girls participate 23% of the time (Shervey & DiPerna, 2017). These differences in active movement during recess create new issues in the battle against obesity in children. As females continue to age and

develop their involvement in physical activity at school continues to decrease (Woods, Graber, Daum, & Gentry, 2015). Studies have shown that elementary recess provides an opportunity for girls to increase their bone density if they take advantage of participating in moderate to vigorous physical activity each day (Shervey & DiPerna, 2017). However, where females fall behind males in their percentage of physical activity during recess they make up for it in the development of communication skills (Shervey & DiPerna, 2017). Females are more likely to spend most of their recess playing low activity games together and engaging in frequent communication with their friends. The formation of communication skills during recess is an important benefit for all students but interventions in elementary schools to increase the total time students spend doing physical activity can assist both male and female students in living healthier lives (Schaefer et al., 2016).

Recess Interventions

The use of physical activity interventions in schools is supported by many researchers because schools are used by a large majority of students in the United States almost every day, they allow students a supervised and safe environment to become active, and they provide a unique opportunity for children to communicate and interact with other children their own age (Potera, 2017). One of the most supported interventions for American elementary schools is based on the methods used in China. Chinese elementary schools structure their school day so that 40% of the day, or about two and a half hours, is spent in recess (Chang & Coward, 2015). This extended amount of time in recess is quite different from that average American elementary school that allows about twenty to thirty minutes for recess once a day to allow more time for instruction (Chang & Coward, 2015). Chinese educators have found that these extended periods of recess benefit their students because they

can better comprehend instruction after engaging in physical activity and their assessment scores continue to be among the best in the world (Chang & Coward, 2015). This challenges the American educational notion that cutting recess times promotes higher test scores because of increased time for instruction.

Other interventions that researchers promote for American recess include tactics to increase moderate to vigorous activity (MVPA) during the current recess times in U.S. schools. Currently, less than half of elementary students in the United States are meeting national health guidelines that suggest children need 60 minutes of MVPA each day (Efrat, 2013). In low-income areas, costly interventions cannot be easily implemented for methods such as new facilities and playground equipment so low-cost interventions would be most beneficial (Chin & Ludwig, 2014). A low-cost intervention that has shown improvement in how students spend their recess time is a program called Recess Enhancement (Chin & Ludwig, 2014). This program uses play coaches, who are most often the students' elementary teachers, that interact with students during recess to teach and encourage students to participate in age-appropriate games with other students (Chin & Ludwig, 2014). The method behind this intervention is that utilizing a supportive and trustworthy adult who is also familiar with the Recess Enhancement Program games, which require little to no equipment, will inspire students to participate on their own terms more actively during recess (Chin & Ludwig, 2014). This method still promotes the same benefits of unstructured play because students are not made to participate only encouraged to if they wish.

Additionally, some researchers suggest that structured play should become part of recess. Structured play differs from the traditionally unstructured recess because students are required to participate in activities that are decided by their instructor, much like in a physical

education class (Scudieri & Schwager, 2017). However, structured recess would vary slightly from structured play because students would have multiple sport and game options to choose from, but they would also be required to participate in at least one (Scudieri & Schwager, 2017). This intervention would be low-cost to the school because sports options like basketball and kickball only require open space and equipment like basketball hoops and balls which are likely already a part of the schools' facilities (Scudieri & Schwager, 2017). Also, the games children could choose to take part in would be similar to the games in the Recess Enhancement Program which do not require much equipment at all to play (Scudieri & Schwager, 2017). Students may lose some of the benefits of free play in structured recess, such as fantasy play, which builds abstract thinking skills in children, and the students' opportunity to take part in less active occupations they may enjoy such as reading or sitting during recess (Scudieri & Schwager, 2017). However, this option would still allow students a choice in their activities during recess and they would participate in much higher percentages of physical activity each week which would be beneficial to their health and to reducing sedentary behaviors in students that promote childhood obesity (Scudieri & Schwager, 2017).

Chapter Three: Methodology

Research Method and Design

This study used a descriptive qualitative research design to obtain information from elementary teachers and principals in rural eastern Kentucky. A semi-structured interview consisting of ten open-ended questions was used by the researcher to gather data. These questions helped the researcher better understand the effects of recess in rural elementary schools.

Sample

The inclusion criteria for this research was that participants were either a public elementary school teacher or principal that is currently employed in a rural elementary school in eastern Kentucky. Criteria of participants such as their gender, race, age, or years of teaching experience were not relevant to the research. The exclusion criteria for this research included participants outside of eastern Kentucky and teachers and principals of independent elementary schools in eastern Kentucky.

The researcher used nonprobability convenience sampling based on the need for participants to be from the specific location of eastern Kentucky and work in rural public elementary schools. Five participants, two principals and three teachers, were recruited through word of mouth and email correspondence between the researcher and potential participants. The employee email addresses and permission to interview participants on school property was obtained along with a letter of consent for research from a principal at each school.

Data Collection Method

Before interviews could begin, the researcher gained ethical approval from Eastern Kentucky University's Institutional Review Board. Following approval, each participant signed an informed consent statement created to ensure that they each understood the interview procedure and recognized that their role in the research process was completely voluntary. The interviews were face to face and were conducted with one participant at a time. The interviews took place at the elementary school where each participant was employed and occurred at a time that was most convenient for them.

Instrumentation and Procedure

Each interview included the same ten open-ended questions and was recorded with two audio recording devices that would be transcribed later. The semi-structured interviews allowed for follow-up questions and lasted until the researcher felt that they received sufficient data for their research. The ten opened-ended questions follow:

1. How would you explain your experience with recess at this school?
2. How does your school's recess policy work?
3. How would you explain the benefits of recess on students?
4. How would you explain the drawbacks of recess on students?
5. How would you improve the school's recess equipment?
6. How do students spend their time at recess when comparing boys to girls?
7. How would you schedule the school day for elementary students?

8. How would you explain the behavior of students on days with recess versus days without recess?

9. How would you explain the effect of recess on academics?

10. How would you change recess at this school?

Participants

Principal 1 was a male elementary school principal with a background as an elementary physical education teacher. Principal 2 was a female elementary school principal with a background as a kindergarten through the fifth-grade elementary teacher. Teacher 1 was a female elementary teacher who taught all subjects to her own first-grade class and worked at the same school as Principal 1. Teacher 2 was a female elementary teacher who taught special education for first through fifth grade at the same school as Principal 2. Teacher 3 is a female elementary teacher who taught second-grade reading and spelling at the same school as Principal 2 and Teacher 2.

Chapter IV: Results

Themes

When all interviews were completed, the researcher transcribed each of the audio files into a word document. When the files were transcribed the researcher began using open

coding to summarize each line of every interview. The researcher then began looking at the responses from the participants and forming themes from their responses. Four major themes resulted from this process: benefits of recess, drawbacks of recess, days without recess, and changes to recess. These themes helped the researcher construct a better understanding of the information gained from the participants.

Benefits of Recess

The two schools used for this research each had a recess policy of twenty minutes each day for all grades. When asked about the benefits of recess all participants agreed that recess was beneficial to the children in some way. Teacher 3 felt that recess was known most for its positive influence on physical activity but that she would mention its importance to the social context of each child's day first. She explained,

Most people are going to talk about the physical benefits of recess first but to me, I think the interaction with each other is much more important than the physical because they are so busy doing stuff in class that they don't get much interaction time. It's free time it's not a planned activity or anything like that so that's good they get to be themselves, relaxed you know and be with their friends and stuff like that but then they are also moving around so you get the physical part too which is also good.

Principal 2 also saw social interaction as a benefit of recess that children needed daily. Social interaction in the school day is unique because it is a routine time where students can express themselves independently with other children their age. Without recess time, student interaction would be greatly reduced to group work in class where the teacher dictates the topic of discussion and lunch where voice levels are monitored closely. Additionally, when

children are not in school, especially in rural areas, they may not have the opportunity to interact with other children their age in a safe, monitored environment.

Four out of the five participants also expressed that recess was beneficial because it allows students to release their energy. Other than when students are changing classes, eating lunch, or taking bathroom breaks, students are in their classes sitting for much of the day. Both teachers and principals said that recess added a needed break to the day that allowed students to stretch their legs and get moving. This movement would then allow students to come back to class with more focus and less fidgeting. The researcher also found that both Principal 1 and Principal 2 mentioned that recess can be exceedingly beneficial to students who have been diagnosed with ADHD or ADD because they have additional energy that needs to be released. Principal 2 said,

Like I said before, I think for some students, especially if you have students that are ADHD or ADD, recess provides that outlet needed to release energy, and you know we are in a time where everything is so curriculum based you can't always do a lot of the fun things in the room that you did in the past so recess gives that social time and it also gives that time for physical activity.

Recess allows all students to refocus and release their energy and children with ADHD and ADD can often need breaks away from instruction more than other students because they have increased difficulty with paying attention for long periods of time. All participants explained that teachers can tell when students need a break from instruction and that there may even some days where additional breaks are added during lessons.

As the researcher was discussing the benefits of recess with Teacher 3 she explained a statistic that she and her fellow teachers use to gauge when students need a break from instruction during the day. She expressed that,

Research shows students can only focus their age, like if they're seven they can only focus like seven minutes before they get bored or lose interest so we are always doing moving stuff anyway even in the classroom after we do a lesson or whole group or something I'll pause it and then we may be up singing Old Macdonald had some vowels or bat vowels, to the batman tune to try to get them moving so they don't just sit there because it's hard to keep little people sitting and writing all day.

The two additional teachers each specifically mentioned how “transition from sitting” was a benefit of recess. All participants agreed that getting students moving could be beneficial to their attention span and learning. Finally, Principal 1 also mentioned that recess could have a positive effect on the obesity rates in his rural area. He explained,

It is very beneficial for us to have recess because a lot of kids sometimes they are stuck in the rooms and they need that time to get out and release some energy and stuff and come back in. I think it's a good thing that the kids need here especially with the obesity rates as high as they are and everything we need to keep as much active recess as possible.

Overall, teachers and principals thought that recess was beneficial to student physical activity, social interaction, attention in class, less fidgeting, obesity rates, and students diagnosed with ADHD and ADD.

Drawbacks of Recess

When asked about the drawbacks of recess the participants were split on their views. Two participants expressed that they did not see any drawbacks to recess and Principals 2 specifically stated, “I think children need recess. I do not see any drawbacks.” On the other side, Principal 1 and Teachers 1 and 2 each thought that recess could have a negative effect on behavior if not either monitored or modified. Principal 1 explained that’s student behavior outside could be an issue when he said,

The only drawback would be sometimes recess is less structured because you go from a room with 20 kids and you go outside with 130 students and 6 teachers and they’re trying to monitor everywhere. I’ve got swing sets, basketball courts, a track, and playground sets so they’re kind of all over the place and that’s usually when the horse playing becomes an issue. For us we've never had any major incidents, for the most part, it's just kids being kids and horse playing, but most of the time our discipline comes from recess because they're outside playing football, and someone gets mad or someone gets pushed down or tripped over.

Without adequate monitoring by teachers during recess the incident rate of injuries could increase. Children can spend their twenty minutes of recess in various ways over a large space and their energy may be a bit too much to handle at times.

All teachers saw drawbacks on classroom behavior after recess and Teachers 2 and 3 expressed how any negative effects of could possibly be avoided with proper modifications to the recess procedure. These teachers discussed how recess at their schools involves snack time with recess. This meant that usually students would buy their snack before recess began

and eat it while they were outside. Teacher 3 modified that procedure and instead had her students play outside and then as they transitioned back to class they could then eat their snack in the classroom. Students were then no longer being removed from unstructured free time and then quickly transitioned back into their seats and expected to be silent. Teacher 2 explained why she wished her school did this as well:

Any drawbacks that I see would be maybe just getting them back into work mode after they've come back inside. Sometimes they are excited and hyper and it's hard to get them back focused on class work. A good idea would be to have a snack right after they come back in and that would give kids time to wind down and sit and eat and it would be easier to get them back focused.

Each of these teachers had several beneficial things to say about recess which may be why they also had ways around the negatives to ensure students were given a chance to experience the positive effects of recess.

Days Without Recess

Days without recess at each would occur when there were bad conditions with the weather such as rain, snow, and cold temperatures. The researcher found that all five participants noted that use of the gym on days without recess was not permitted due to physical education classes that took place there. Teacher 1 explained what a day without recess looks like in her classroom:

I think they get more bored maybe? Because even if it's snowing or raining outside they'll be like 'Are we going out for recess?' I have to be like, "No baby it's lightening outside we can't go out for recess", but they really want to go outside so I

think that they miss not being able to get movement in. Even though we do movement stuff in the classroom on those days, like GoNoodle, where they are singing, dancing and exercising, it's not the same as getting out there with their friends and socializing and just running. The classroom is more structured, and they would rather be unstructured.

The use of technology in the classroom on days without recess was common among the participants.

All five participants mentioned technology of some sort in their interview and the use of the program GoNoodle was most mentioned. Teacher 3 also pointed out that the full recess time of twenty minutes was not used on days without recess:

We stay in the classroom, but we have on our TV's. GoNoodle is a dance thing they've got on there where they can move around and it kind of breaks up the monotony, you know just by getting them moving. They'll have little things on there for them to play or do the movements to it and exercises and stuff. But we stay in the classroom and may do that for a few minutes but it's just quick and we get right back to work.

These days without recess shorten the break allowed for students and cut down on the physical activity that is offered. The classrooms do not offer open spaces like the playground and without the use of the gymnasium due to physical education classes the options students have to move are limited. Educational technology in the classroom is a better option than having no break at all because it promotes movement. Interactive technology is beginning to

be used more frequently in schools everywhere because of its benefits on student behavior and its promotion of physical activity.

These technology options allow for students to release some of their energy in the classroom that they would normally expel at recess. However, three participants felt that on days without recess students were more fidgety during class time. This may be because their movement on these days is more structured than on days without. The researcher noted that when days without recess was mentioned during the interview with Principal 2 she had different views on discipline than Principal 1. She stated,

Your behaviors are less on days when they can go outside, on warm and pretty days you see a lot less discipline in the office. When they go for several days where we've had a lot of rain or if it's cold you have a lot more discipline referrals in the office. Students are usually just being rambunctious and a little disrespectful and not staying in their seats, you know a lot of things where if they had that outlet to let that energy out then they don't happen.

Principal 1 felt that he had more discipline problems on days with recess when kids were transitioned from a structured environment to an unstructured environment and they began horse playing. Principal 2 felt that she had more issues with discipline on days where students could not release their energy outside. It was interesting that these schools were similar in location but different in their experience with discipline issues.

Discipline issues also caused students to have days without recess. Each school used recess as a form of discipline but gave the students multiple chances to keep part of their recess time. Teacher 1 described this process with her first graders:

No, they don't always get recess. Our school allows us to take part of their break. First grade is different than middle school. For first grade, we go by a behavior card system. If they get their card flipped once it's just a warning. Their card starts out on green, if they misbehave it gets flipped to yellow which is a warning. From there, if they get their card flipped twice that's orange and they lose five minutes off their break and then another flip would be blue, and they lose ten minutes of recess. If they get 4 flips its red and they lose all their break.

Each participant described discipline in their class in a similar way. While other classes may not use behavior cars there were warnings followed by loss of time from their recess in five-minute intervals. To keep from promoting sedentary behavior in the time students may lose from their recess each school had the students walk the track on their playground. The student is not interacting with other students or permitted to play but they are still taking part in movement while they are waiting for their punishment to end. Principal 2 explains this:

If a student loses their recess, not all of their physical activity is taken. They walk so that they are still getting activity. If they lose 5 minutes they walk for 5 minutes, then they can go play. You know if its 10 minutes you walk that way you are still getting physical activity and you're not just sitting there.

This method of discipline still allows for students to move and it also allows for students to have multiple chances to still receive recess even if they misbehave a bit throughout the day. All participants agreed that allowing the students to have some form of movement during recess was important to each student's day.

Changes to Recess

When the topic of changes to recess was introduced on the interview guide all participants had something that they wished they could change to their current situation. One of the points that stood out to the researcher was that four participants saw a need for more swings. Each school currently only has four swings as part of their playground equipment and an average of 80-100 students at recess at one time. Each school has a monitoring system to limit the amount of time students are on the swings so that more than four children have a chance to use them during the recess period. Teacher 3 described this to the researcher:

We need more swings, no matter how big they get or how long swings have been around swings and slides have always been the hit over every little thing even the climbing stuff. And we only have 4 swings outside so definitely could use more swings for the kids. I have to make them count and then someone has to get off, so they can share. Sometimes there is even a line to use them.

Teachers and principals saw this as an issue at their schools and Teacher 2 also noted that she would like more ADA accessible swings at their schools because other schools in the area had them for their students with special needs but hers did not.

Another change that was suggested was that recess would be separate from snack time. One teacher had already begun using this method in her classroom to cut back on any negative effects of recess, as mentioned above, but Teacher 2 also wanted this change from her perspective as a mother:

I wish that all the classes here at this school had a separate time for recess and a separate time for snack. I see this from a parent's perspective. I have a child that goes

to school here and he kept coming home with his snack box and his food was still in there. I asked him, 'Why are you not eating your snack?' and he told me, 'I can either eat or play and I want to play,' so I wish that they had a designated time for snack separate from recess.

The nutrition of students is important and having a time where students can exercise is also beneficial to their health and focus in the classroom. This change has already been implemented in other classrooms at this school and would be an ideal option for all classes to make sure students are getting to eat their snacks and to aid in better transitions back to instruction.

Other changes suggested for recess were more time for recess. All five participants expressed their view that recess should be longer but that current instructional demands inhibit those changes. Principal 1 also pointed out that he wished he could add on to the space he has at his school for recess currently in order to have more classes outside at a time. He explained,

For this school, I've got a huge playground, but I wish I had two. With my school, I've got over 800 kids and I wish I had two playgrounds so that way maybe I could have an elementary recess and one for middle school. I could coincide two breaks going on at the same time. We stagger them now so that there are no little kids out there with big kids. There are only appropriate age levels together but if I could do two recesses at one time that would be four classes instead of two getting recess. I could get more class time for students and you know it would really help my instruction time too.

Adding on a new playground to the present equipment would provide more movement opportunities for students during recess and it would help improve instruction time.

Additionally, two playgrounds would be beneficial on days where the weather forecast predicted rain in the afternoon. If more classes could go outside at a time, there would be enough time in the schedule to get all the kids outside before the rains began. Currently, the recess schedule begins around 10 A.M. in each school and concludes around 2:30 P.M. to prepare for dismissal. However, adding additional time to recess or new playgrounds is not realistic at this time for these schools due to lack of budget and current instructional demands.

Discussion

When looking at the benefits of recess mentioned by the participants, their responses correlate with data found in the researcher's literature review. Dunn (2017) stated that student choice was a major benefit of recess because students can be energetic in a way that they choose while also engaging in movement and motor skills. Several of the participants mentioned the benefits of the unstructured environment of recess versus the structured environment of the classroom. Teachers saw positive impacts on student behavior after outdoor recess that was not seen when recess was in the classroom. Dunn (2017) also mentions the importance of children having multiple opportunities each day to practice their social skills. Principals and teachers views social interaction as a benefit of recess that they may not receive if recess if outdoor recess was taken away.

The drawbacks of recess mentioned by teachers and principals during their interviews were significant because, to the researcher's knowledge, there is no current scholarly data

that specifically mentions negative effects of recess. However, the methods that some teachers use to intervene with difficulty regaining student focus could be significant in assisting other classrooms that experience the same issues after recess. Additionally, there was disagreement between principals about discipline on days with recess versus days without. In the section of recess drawbacks, Principal 1 felt there was more discipline on days with recess due to the increase of horse playing. The school allows children to walk to when they are disciplined at each school used by the researcher. This removes children from a social environment to punish them but also gives them an opportunity to gain physical activity. These methods around the drawbacks of recess are beneficial interventions that are simple to implement.

On days without recess, technology is an important part of finding ways for children to still participate in a break from class and some sort of physical activity. Research has shown that indoor recess dance videos produce about twelve minutes of physical activity to students (Erwin, Koufoudakis, & Beighile, 2013). GoNoodle was the instructional dance video program used by each teacher that the researcher interviewed. These alternative indoor activities are one way to increase the amount of movement students receive indoors when weather does not permit outdoor recess. Physical activity options on these days are important to reduce the amount of sedentary activity that students participate in when they cannot go outside.

The final theme of changes to recess revealed changes that require changes to scheduling and available resources. Each school used for this research was built within the last five years and playground equipment was new when the schools were built. Each play area included multiple areas for children to use such as jungle gyms, swings, track, basketball

courts, and one school had an outdoor musical instrument station. However, a change that four out of five participants mentioned was more swings. At both schools, a line forms during recess for use of the swings which increases sedentary behaviors for those waiting to use the equipment. As mentioned in the background, the budgets of these schools are getting smaller and the funds are not focused on improving playground equipment. In these low-income areas, it is important that the teachers who supervise recess use their available resources to best utilize recess time. Much like the changes made to recess and snack, if teachers found ways to form a better system for students who wanted to use the swings the amount of sedentary activity at these school during recess could be reduced.

Chapter Five: Conclusions

Elementary school takes place during the entirety of middle childhood which includes ages six to twelve (Rathus, 2017). During this time children are growing about two inches each year and their weight doubles (Rathus, 2018). This is an important time for children to build healthy habits like eating healthy foods and engaging in regular physical activity. In the United States, 16% to 25% of children are overweight or obese and children who live in rural areas have a 25% higher chance of becoming overweight. Besides after school sports, recess is the first line of defense against these trends in obesity because it is available to all elementary children during the school week in a safe environment. Participants highlighted the physical benefits of recess in eastern Kentucky and mentioned other benefits that could be just as impactful to students, such as social and behavioral benefits.

According to developmental research, middle childhood is a time where children are becoming aware of their outward appearance, persona, and also becoming more interested in

social relationships and group interaction (Rathus, 2017). Interacting with other students during recess can help build children's ability to express themselves, listen to others, practice imaginative play, and feel socially accepted. Self-esteem also tends to decline during this age, so it is important that teachers and administrators monitor interactions between children at recess and look for those struggling socially during this time (Rathus, 2017). In rural eastern Kentucky, class sizes tend to be smaller and teachers can form closer relationships to students than teachers with larger class sizes. This may be an additional benefit for students in these areas and should be considered in future research.

Instructional demands constrict the freedom that teachers and administrators have with their time during the school day. Technology also continues to advance and is used by children at very young ages. In many cases technology can promote sedentary behaviors in children during their free time if not monitored. Over use may even contribute to an increase in the number of children with dyslexia and issues with learning to write and calculate math problems (Ružić-Baf, Rajović, & Debeljuh, 2017). However, when monitored by teachers and parents and used for educational or exercise purposes, technology can promote learning and movement for students and offer alternatives to sedentary activities when unstructured outdoor time is unavailable. The use of these technologies in rural eastern Kentucky is beneficial in allowing students to achieve physical activity and social interaction in the classroom when they cannot participate outside.

The teachers that participated were resourceful with their time and found different methods to ensure students made the most out of their recess time. All participants felt strongly about the benefits of recess on their students, wanted to improve upon recess in the future, and hoped for more recess time to be allowed for students. This research provided an

angle on recess in rural eastern Kentucky that has not yet been viewed. The sample of principals and teachers used in this research helped form a better understanding of the effects of research in eastern Kentucky from a new perspective that will be important to further research on this topic. To consider making changes to the recess in rural eastern Kentucky and to better understand its effects on students in rural areas, further, more comprehensive research will need to be conducted.

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