

Playground Settings and the Impact of Recess on Classroom Attention

Christine Peterson, B.A., M.S.E.

Psychology Department

Human Development Center

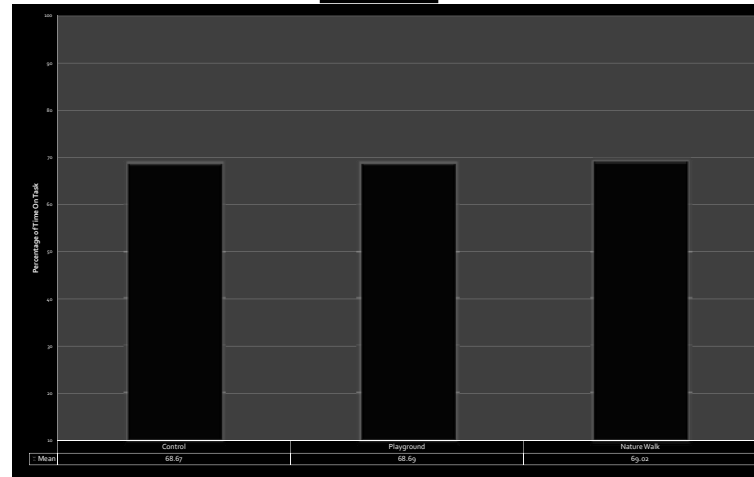
University of Wisconsin – Eau Claire



Introduction

- Interest in the area of school-based recess has gained some attention in recent years. Some believe that recess should be eliminated to increase time spent on academics. Others believe that children benefit from recess, both physically and mentally.
- Previous research findings of observations of preschoolers' activity levels showed that students were engaged in low levels of physical activity throughout the day (Brown et al. 2009).
- It has been shown that children who were deprived of recess for longer periods of time became more fidgety and attention decreased from the task at hand. When granted recess time, children were less fidgety and off-task (Jarrett et al. 1998).
- It has been found that indoor recess has the same effects on post recess attention as outdoor recess, even though recess indoors may not provide as much area or space for children to play as would an outdoor environment (Pellegri, & Bjorklund, 1997).
- However, recess does take time away from the school day and academic work time. In addition, recess may be an opportunity for aggression and bullying behaviors to occur. However, previous research has found that aggression occurrences are uncommon and account for less than 2-3% of children's behaviors (Pellegri, & Smith, 1993).
- Some advocate for recess to occur in more natural environments.
- Children who played in a forest area performed better in motor fitness tests than children who played on the traditional playground. Furthermore, it is believed that a natural environment is stimulating and promotes play and learning (Fjortoft, 2001).
- Natural environments may also provide children with more open, dynamic, varied opportunities which may be risky. Children may have the opportunity to explore and learn their mental and physical limitations. This can be seen as both a positive aspect and a drawback (Little & Wyver, 2008).
- One thing is clear, additional research is needed in the area of recess in more natural environments.
- The current study extended previous research on classroom attention following recess.
- In the study, two different additional recess conditions were compared: playground recess and a nature walk. A control condition of no additional recess was also included.
- The three conditions were evaluated on the basis of on-task behavior in the classroom directly following the additional recess or class time as usual.

Results



- Results suggest that recess type or an additional recess does not have a significant effect on classroom attention.
- There was no significant difference between the two recess conditions and the no recess condition. The mean time on task were as follows: control condition ($M = 68.67, SD = 17.98$), playground ($M = 68.68, SD = 26.89$) and nature walk ($M = 69.02, SD = 25.09$). The overall F for the one-way ANOVA was not statistically significant, $F(2, 84) = .002, p = .998$.
- There were 35 control, 27 playground and 20 nature walk conditions.
- Results from Interrater reliability agreement was a mean of 92% with a range from 86%-97% agreement. Interrater reliability was completed once a week for six weeks.

METHOD

Participants

- Four three-year old preschool children participated. All participants were males.
- Each participant's parent or guardian gave written consent for their child's participation.
- All four participants were exposed to each condition.

Setting

- Preschool classroom following typical daily routines.
- Additional morning recesses were held either on the playground or on a nature trail close to the preschool.

Measures

- Dependent variable: Percentage of intervals (15-sec) on-task during a 15-min observation period.

On-task behavior was defined as complying with teacher instructions, and attending to the teacher.

Conditions

- Playground Recess: Children played in the playground area attached to the school.
- Nature Walk: Children went on a walk on a nearby nature trail.
- Control: Children stayed in the classroom, engaged in daily routines and activities.

Procedures

- The classroom teacher was given a schedule of the conditions in a counterbalanced order.
- The teacher or teacher's assistant would implement the condition as indicated by the schedule
- Children did not receive an additional recess on control days.

- Recesses typically lasted 30 to 60 minutes.

Data Collection

- Following each condition, undergraduate student research assistants conducted on task behavior observations in the classroom.
- Research assistants were trained by the author prior to conducting the study.
- Interrater reliability was conducted with a student researcher each week for the six week period.

Experimental Design

- Alternating Treatments Design

Discussion

- The primary purpose of the current study was to extend previous research on the impact recess has on classroom behavior and attention.
- Recess in natural environments did not differ significantly from typical recess conditions.
- Furthermore, an additional recess did not increase time on task for the participants.
- Compared to the control condition, recess on the playground or nature walk did not lead to significant difference. All three conditions yielded similar results.
- Contrary to previous research findings, recess did not result in more time on task compared to no additional recess.
- Limitations
- This research was conducted in an applied school setting and extraneous variables could not be controlled for.
- Recesses took place right after all of the children arrived at school in the morning.
- Recesses were additional to two other recesses that were scheduled for all children mid morning and in the afternoon.
- Weather conditions impacted the schedule of recess conditions in the counterbalanced order. Adjustments had to be made.
- Small sample size, and all participants were the same gender and age.
- Participant and student researcher absences also could not be controlled for and data collection measures had to be adjusted to accommodate.
- Individual differences of the participants could not be controlled for and may have impacted their percentage of time on task.
- Future Research
- Future research should replicate the current findings with other populations and age groups of school aged children.
- Timing of the recess regimen could also be manipulated.

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