



## Research Article

# A naturalistic study of elementary recess in Canada

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The purpose of this naturalistic observation study was to observe in a natural setting, the actions of elementary level students during recesses to better understand student behaviour. Three different students were observed each 20-minute recess and the recorded behaviors produced data that revealed activity or lack of each recess. Recess, an informal period where students at the elementary level in grades kindergarten through eight were observed playing, communicating or being inactive, proved surprising. 432 (18 observations per session x 12 sessions x 2 schools) direct observations led to facts and conclusions that recess was a time to communicate with others while moving in various physical ways that exposed distinct patterns of play (games), walking, standing (idleness), individuality and group cohesion. Generally, students were engaged in play that was informal, spontaneous, and active which is a pragmatic outcome that builds upon our knowledge of recess in elementary schools.

**Keywords:** Naturalistic observation, recess, elementary

## 1. Background

Globally, opportunities to play should be commonplace and natural in a child's life and it is a "basic right, fundamental to children's development" (International Play Association [IPA], 2021; Unicef, 2020). Children need time to relax and interact with others without adult direction as Gray (2013) suggests:

Children are designed, by nature, to play and explore on their own, independently of adults. They need freedom in order to develop; without it they suffer. The drive to play freely is a basic, biological drive. Lack of free play may not kill the physical body, as would lack of food, air, or water, but it kills the spirit and stunts mental growth. (pp. 4-5)

Recess is a time for active development as recess "promotes social and emotional learning and development for children by offering them a time to engage in peer interactions in which they practice and role play essential social skills" (American Academy of Pediatrics, 2013, p. 184).

As an Ontario elementary educator, one of the daily tasks is to supervise students during their nutrition breaks which were sometimes known as recess breaks. These breaks were a short period of time, usually 15 to 20 minutes, to have a snack which they brought from home. Following the snack students move outside within a defined playing area/field with their peers as they see fit. The break was a time to informally play, talk freely and basically do what they want (Hayes, 2021). Recess could be indoors due to weather (rain, cold) and if so, was not part of this study as only outdoor recesses were observed.

Teachers assigned to yard duty/supervision during this break would also be outside within the activity area/field to oversee and supervise students. Typically, in a school of 500 elementary students there would be three to four teachers walking around the yard/field during the break to offer proactive guidance, reminders and resolve problems. In each Ontario elementary school there is a duty schedule, and each staff member is provided with a copy, and it is usually posted in the staff room for all to check periodically to ensure all are on duty as scheduled and the students are supervised.

For over a decade I supervised students during breaks and as a result I have gained both insight and wisdom is imparted herein. From the onset of my career as a fully qualified educator in the

province of Ontario there was a great deal to be aware of when on duty during a recess break. The school handbook informs and outlines expectations for all teachers stating: "All students are expected to go outside for every scheduled break. Students [remaining] in the school must be supervised by a staff member at all times" (Near North District School Board, 2018, p.1). Within the school handbook the daily school schedule is communicated, for example:

8:10-8:30 a.m. 8:30 a.m. Students off buses and onto yard  
 8:30 Bell rings - students enter school, classes begin  
 8:30-10:30 a.m. 120-minute Instructional Block  
 10:30-10:50 a.m. 1st Nutrition Break  
 10:50-11:10 a.m. 1st Recess Break (lunch)  
 11:10-12:50 p.m. 100-minute Instructional Block  
 12:50-1:10 p.m. 2nd Nutrition Break (lunch)  
 1:10- 1:30 p.m. 2nd Recess Break  
 1:30- 2:50 p.m. 80-minute Instructional Block  
 2:50 p.m. Dismissal, Bell Rings (supervision ends when buses leave) Parents are responsible for their children after 3:10 p.m. (Near North District School Board, 2018, p.1)

A student attending this elementary school will be able to eat a snack for 20 minutes and then go on a 20-minute break outside under the supervision of adults, most often teachers, who are qualified and informed of legal responsibilities while on duty. The right to have recess is documented in the Ontario Education Act (legislation/law) for instance:

The length of the instructional program of each school day for pupils of compulsory school age and pupils in full day junior kindergarten or kindergarten shall be not less than five hours a day excluding recesses or scheduled intervals between classes. R.R.O. 1990, Reg. 298, s. 3 (1); O. Reg. 78/14, s. 1 (1).

In the intermediate division and the senior division, a principal may, subject to the approval of the board, provide for recesses or intervals for pupils between periods. R.R.O. 1990, Reg. 298, s. 3 (6).

There shall be a morning recess and an afternoon recess, each of which shall be not less than ten minutes and not more than fifteen minutes in length, for pupils in the primary and junior divisions. R.R.O. 1990, Reg. 298, s. 3 (8). (Ontario Education Act, 1990, p.12)

Recess is, in addition to instructional time, clearly viewed as non-instructional time, it is a period of informal activity for students that is mandatory in primary and junior levels (Kindergarten through grade six) and less so in the Intermediate and Senior grades (7 to 12) where breaks are often inside and for shorter periods of time between classes as they transition from class to class.

Recess due to its position in law is addressed by the Ontario (provincial government) Ministry of Education via its Ontario Health and Physical Education curricula (Ontario Physical and Health Education Association [OPHEA], 2019a) for elementary grades (Kindergarten through grade eight). For example, the Ontario Ministry of Education (OME) has developed specific expectations which suggest that students by the end of grade one will, ". . . identify a variety of ways to be physically active at school and at home every day (e.g., at school: *playing actively at recess; participating in a variety of physical activities in class*" (p.98). By acknowledging the importance of physical activity formally and including these recess expectations in the elementary curriculum the message that physical movement is as important as other expectations is delivered to educators in Ontario schools and all who read the curriculum.

As educators and other stakeholders become familiar with the 2019 curriculum, readers will come across actual scripts prepared by the Ontario Ministry of Education [OME] to cue educators as to how they may address certain topics and issues. One such important issue is that of concussions for example, in this script provided by the provincial government of Ontario:

**Student:** "A concussion changes the way the brain normally functions. It can occur as the result of a bump to the head, neck, or body that causes the brain to move rapidly within the skull - for example, if someone accidentally runs into a goal post during a soccer game or collides with another student during recess. I know that even when I wear a helmet, my brain can still be injured, as the

helmet was designed to protect my skull but not to prevent concussions. You can't see right away that a concussion has happened, but there can be signs and symptoms afterwards."

**Teacher:** "If a student suffers a hit to the head or neck while playing soccer during recess and acts differently – seems more angry or more sad – afterwards, could these increased emotions be related to the hit?" (p.145)

All Ontario educators at all grade levels are lawfully responsible for "ensuring the safety of students during instructional activities and also for encouraging and motivating students to assume responsibility for their own safety and the safety of others" (OME, 2019, p.62). Safety includes physical and emotional (affective domain) safety and prevention hence the position that, "everyone has someone to play with, or talk to at recess, if they want" (OME, 2019, p.222). Educators practice inclusively to decrease the chance of exclusion of a student or students from the curriculum which includes recess as a time for informal activities.

Students also have a role to play in leading their peers in the appropriate direction during the school day for instance, this script for Ontario elementary educators concerning student role modelling: "*Student:* I can lead by example. I can be a role model for younger students at recess by having a healthy snack, like a piece of fruit, and playing an active game, like tag, instead of standing around" (MOE, 2019, p.231). This concern for the whole student is omnipresent in the Health and Physical Education (OPHEA, 2019b) curriculum just as emotional, physical and community safety are entangled throughout activities, topics, and resources. Student identity and developmental needs are noted for example, one excerpt from the OME (2019) elementary curricula, addresses what is normal suggesting,

assumptions are often made about what is 'normal' or expected for people based on their sex or gender – for example, men take out the garbage; nursing is a woman's job; boys play soccer at recess and girls skip rope or stand around and talk; boys are good at weightlifting and girls are good at dancing. (p. 232)

Within this Ontario 2019 elementary curriculum excerpt the notion of gender and activity is offered as a prompt for further discussion in classrooms/schools. What, and who does what at recess is identified as a topic worthy of discussion and further thought.

From a physical domain orientation, the curricula also present recess time as a time of exercise and development as noted in this passage: "Checking how I feel after skipping or playing soccer at recess also gives me information about my fitness level" (OME, 2019, p.243). Recess is viewed as a time for informal observation of self as students enjoy free time to play and interact with peers. Often elementary educators will support recess activities by making certain equipment available such as a ball, bat or frisbee and by doing so educators "promote the involvement of all the students in the school in "healthy schools" activities such as waste-free lunch programs and active recess activities" (p.268).

The opportunity for individual teachers or the entire school to support recess activities is always present. In fact, some elementary schools in Ontario have school teams dedicated to health and wellness during the school day. One example is the whole school approach noted in the OPHEA (2019c) resource. OPHEA is an arm of the Ontario Ministry of Education to oversee OPHEA asks: "What has your school team identified as your priority health topic for this school year? What inspired you to choose this topic?" (p.1) One possible response articulated by OPHEA (2016) suggests,

our goal was to work towards increasing the amount of time students spend being physically active during recess time. This health topic was chosen in consideration of the inactivity that was being witnessed by staff members, especially when our fields were off boundaries due to poor or unsafe conditions. In order to gather as much information about our current recess experiences as possible, staff, students and parents were asked to participate in an online survey. The collected data provided us with direction . . . . To further enhance our students recess experience and increase physical activity levels. (p. 1)

As an Ontario elementary educator one of the daily tasks was to supervise students during their nutrition breaks/recess breaks. This was viewed as an important task as recess has a fundamental role in the cognitive, social-emotional and physical growth of students and warrants attention from both educators and researchers (IPA, 2021; Unicef, 2020).

Teachers assigned to yard duty/supervision during this break would also be outside within the activity area/field to oversee and supervise. In a school of 500 elementary students there would be three to four teachers walking around the yard during the break to offer pre-emptive guidance, prompts and information to help resolve conflicts between students when necessary. For over a decade I supervised elementary students during breaks and as a result I gained both insight and wisdom that can be imparted herein. From the onset of my career as a fully qualified and certified educator in the province of Ontario there was a great deal to be aware of when on supervisory duty during a recess break.

### 1.1. Purpose

The purpose of this research was to observe Ontario Elementary school students in a natural setting to document the actions of students during 20-minute recess breaks. Resultant observational data helped decode and understand recess activity in a meaningful way to help process the many observations while drawing basic conclusions and recommendations.

## 2. Methodology

NO [Naturalistic Observation] is neither empirical nor qualitative (Creswell, 2015), and it is not experimental as coded observations can be numerated and charted via frequency counts and often analyzed quantitatively (Coplan et al., 2015). Piaget (1952) used NO to investigate educative processes utilizing constructivism as NO provides an element of confirmability wherein evidence is grounded within perceptions and observations (Chen & Wang, 2021; Lincoln & Guba, 1985; Marcella & Howes, 2015).

This NO required no intervention “staged by the researcher or direct interaction with people; [NO] does not include collecting personal information that will be disseminated with visual materials; and . . . there is no reasonable expectation of privacy among those being observed” (Government of Canada, 2017a, p. 1). This NO unfolded over 12 weeks and did not require ethics approval. More specifically, ethics review is not required for research involving the observation of people in public places where:

it does not involve any intervention staged by the researcher, or direct interaction with the individuals or groups; individuals or groups targeted for observation have no reasonable expectation of privacy; and any dissemination of research results does not allow identification of specific individuals (Government of Canada, 2022, p. 1).

NO is utilized to examine human behavior naturally (Goffman, 1959), as subjects do not know that they are being observed (Lincoln & Guba, 1985). The Government of Canada, Tri-Council Policy Statement [TCPS], suggests naturalistic observation studies in public places where there is no expectation of privacy are exempt from Research Ethics Board [REB] review. “The observation does not allow for the identification of the subjects, hence it is regarded as minimal risk” (Government of Canada, 2017b, p. 1). Therefore, no attempt was made to identify or contact any students observed.

NO produces data by noting behavior, events, and noting physical characteristics in their natural setting for example, Chen and Wang (2021) observed social appearance anxiety among high school students whereas Marcella and Howes (2015) observed engagement in early childhood classrooms. More related to this study, Coplan et al. (2015) studied schoolyard social participation and Vlachou et al. (2013) observed rates of *bullying* among children. Much earlier Amato (1989) observed caretakers of children, while Grady et al. (2012) used NO during preschool drop-off. Naturalistic observers documented, processed, and reported what they observed. NO is well suited to observation in specific settings for instance DiMercurio et al. (2018) observed infants and self-touch to determine and ground applicable theory.

## 2.1. Sample

Students observed in this study were Ontario (Canadian) elementary level students in grades one through eight. From the available population outside in the school yard for recess, 72 students were observed over several weeks of observation at two schools. Three students were observed during recess in one 20-minute observation session. Each session involved three different students, therefore, over 12 sessions at one school, 36 students were observed. Since two schools were included, this doubled the sample size to 72 elementary school level students which satisfies sampling validity concerns (Creswell, 2015). A random sampling mode was used within this Naturalistic Observation (NO) which allowed for equal chance selections of students within school yards during recess. Participants were not contacted in any way, and they did not know they were observed. Student gender was not identified, and student ages were also not realized herein.

## 2.2. Data Collection

I was the observer and recorder who used a checklist (see Table 1) and anecdotal notes to gather data. Being at a distance I believe I did not influence behaviors observed consequently data are generalizable due to external validity (Creswell, 2015). I would either drive to a school and sit in my car and observe the school yard or walk to a school. Often, I would stand next to a public bus stop sign where I could stand for the observation period without looking out of place or unusual as it appeared I was waiting for the city bus. I held my observation tool and recorded without any contact with others. I would observe the entire recess from bell to bell in each observation session.

Table 1  
20 minute - Observation Tool (4 recesses)

Behavior	Frequency												Total
	Person A	B	C	D	E	F	G	H	I	J	K	L	
Idle - Standing													
Sitting													
Walking													
Running													
Communicate with others													
Throwing													
Pushing													
Skiping													
Dancing													
Injured/accident													
Conflict													
Game playing													
Other (laying down/ kneeling)													

I completed 12 sessions over several weeks on random days often a Tuesday, Wednesday, or Thursday at two schools. I avoided Monday and Friday since these days are often days where schools are closed for various reasons and/or special events occur. The result was a total of 24 (2 schools x 12 weeks) observation days. At each school I randomly chose 3 students to observe for one-minute, over the 20-minute recess, alternating from one-to-another each minute. Each 20-minute observation period produced 6 observations of one minute duration for each student. One observation session produced six observations per recess, therefore over 12 sessions, 72 observations were collected. In total, one observation session (recess) produced 18 observations of three students and over 12 days the observations totalled 432 (18 observations per session x 12 sessions x 2 schools) observations during recesses at two schools over time.

At the completion of the observation period, I would re-examine data via reflection and revisit noted observations to re-examine data. I observed morning, noon-hour, and afternoon recesses randomly at each school for 20 minutes per recess. Gender was not used herein, and grade was not

determined due to the nature of this NO. No attempt was made to identify or contact any students observed hence students are noted alphabetically as letter labelled subjects.

This recess research was linked to my ontology (Lincoln & Guba, 1985), and my assumptions guided perceptions and the interpretation of observations (Marcella & Howes, 2015). This NO stretched over several weeks and did not require ethics approval as pseudonyms and anonymity was preserved and no contact was made. All dates, times and locations were recorded realizing mostly qualitative information observed to identify trends and results. Table one below was applied (paper, pen, clipboard, and a timer/iPhone to gauge a segment of time) (observation strategy) was followed.

### 3. Results

The observation tool (see Table 1) was critical to efficiently document behaviors throughout the study. One example of completed observations, illustrated in Table 2, captures three students at one school during one recess break (color coded A, B, C). Each session of observation was recorded naturally within view of the schoolyard over 20 minutes. Each alphabetical letter represents a different students' behaviour during recess. The observation tool evolved from the experiences of this researcher and was used repeatedly to document recess activities over several weeks.

Table 2

20 minute - Observation Tool (4 recesses)

Behavior	Frequency												Total
	Person A	B	C	D	E	F	G	H	I	J	K	L	
Idle - Standing	4	2	3	2	4	4	5	2	3	6	2	2	39
Sitting	0	0	0	0	0	0	1	2	0	0	2	4	9
Walking	2	3	4	3	4	4	1	2	1	1	1	1	27
Running	0	3	2	1	2	1	0	0	0	0	0	0	9
Communicate with others	4	2	4	3	2	2	2	3	3	4	3	2	34
Throwing	0	0	1	0	0	4	0	0	0	2	2	0	9
Pushing	0	2	2	1	0	2	0	0	0	0	1	0	8
Skipping	0	2	0	0	0	0	0	0	0	0	0	0	2
Dancing	0	0	0	0	0	0	0	1	1	0	0	0	2
Injured/accident	0	0	0	1	0	0	1	0	0	0	0	0	2
Conflict	0	1	1	0	0	0	0	1	0	0	0	0	3
Game playing	1	5	4	1	1	2	1	0	0	0	0	0	15
Other (laying down/ kneeling)	1	2	1	1	0	0	0	0	0	0	1	2	8
Other notes													

By looking at the total column a trend emerges suggesting the most frequent behaviour at recess is standing still being idle followed by communication, walking, and game playing. It was possible to do all these behaviours during one recess and the duration of each is somewhat unclear as sampling was minute by minute over a 20-minute recess resulting in a maximum of six observations per student. However, it was possible to observe more than one behavior during the minute for instance a student could walk, sit, stand idle and run while playing a game in a minute of observation. In sum, for each student, six minutes of a 20-minute recess was observed (30% of recess); a significant portion of the recess break. Gender was not used herein, and grade level was not determined due to the nature of this NO (no contact). The recess behaviour occurring the least included skipping, dancing, injuries, and low levels was conflict.

Table 3  
20 minute - Observation Tool (Totals)

Behavior	Total (432)
Idle - Standing	256
Sitting	132
Walking	301
Running	237
Communicating with others	350
Throwing	44
Pushing	56
Skipping	22
Dancing	19
Injured/accident	11
Conflict	12
Game playing	315
Other (laying down/ kneeling)	86

Once all observation records were combined over the 12 observation sessions at both schools the total column revealed that the most recurrent behaviour during elementary school recesses was communication with others (talking). The second most frequent behaviour was game playing (hand games, tag) followed by walking and standing somewhat still. It was possible to observe each of these behaviours during one observation period during recess.

The duration of each behaviour was imprecise as the sampling frame of one minute caused me to move onto the next student. Again, the 20-minute recess resulted in six observations per student (30% of total recess time).

#### 4. Discussion

From the onset of this research, it was understood that “unstructured play may contribute particularly to developmental and social-emotional outcomes such as problem-solving and creativity” (Gallagher-Mackay et al., 2021, p.4). Therefore, recess was viewed as not just an informal break to play; recess, within “schoolyards support effective implementation of comprehensive school health” (Gallagher-Mackay et al., 2021, p.4). The benefits of play and informal outdoor breaks was a means to reduce stress, increase physical activity and improve social cohesion within peer groups within each elementary grade level (K-6) (Hayes, 2021; Pellegrini, 2008).

Recess is an opportunity for self-directed play involving imagination and social skills (Chen, 2017; Sohn, 2015). Also, children are better able to settle disputes peacefully when provided with informal self-directed recesses (Adams, 2017; Hayes, 2021). Free play during recess builds identity, self-image, and friendships (O'Connor, 2017; Ren & Langhout, 2010). Recess that is unstructured helps students refocus and reenergize away from seated classroom tasks (O'Connor, 2017; Sohn, 2015). Recess often involves and requires students “to initiate, negotiate, cooperate, share, and build relationships with one another” (Chang & Coward, 2015). Recess outside enhances the ability to concentrate which enhances learning (Adams, 2017; Castelli et al., 2015; Chen, 2017; Goldstein, 2012). A lack of recess playtime has a detrimental impact on development (Gallagher-Mackay et al., 2021; Petrey, 2016), and can make people less resilient (Ginsburg, 2007; Hayes, 2021).

In the current study the most recurrent behaviour during an elementary school 20-minute recess was communication with others (talking) over the 432 observations of one minute duration. While it was possible for a student to talk and run or talk (yell) and stand still and talk to others, 350 instances of noted conversation with others was documented. Second was game playing which indicated a level of play observed such as hand games or tag. Some activities were difficult to label since they were not known to me and somewhat spontaneous such as chasing another or pushing someone while talking.

Each school yard was large, and well-kept which is important as a recent study concluded:

73% of Ontario schoolyards had an overall Schoolyard Quality Score that was less than of the optimal score. There is wide variation between schools – scores range from here to a high of 61 on a scale with a possible top score of 88. This represents major gaps in opportunities for well-being for students, depending on which school they attend. (Gallagher-Mackay et al., 2021, p.1).

The schools in this study would score high since they had large, fenced yards that easily accommodated all students during play, had playground equipment (basketball hoops, game grids on grounds, equipment such as balls, skipping ropes), and were well maintained. Despite the yard quality, it was found that many elementary students observed simply chose to walk and/or stand somewhat still. Past research has indicated that “more green space contributes to greater levels of moderate to vigorous physical activity in children, and certainly, lower risks of injury (Gallagher-Mackay et al., 2021, p.13). It could be related that the large outdoor area at each school was the reason injuries were one of the lowest observed at just 11 occurrences out of the 432 observations. An injury was perceived as someone who had fallen, run into another person or thing and/or the presence of crying due to an accident; this inference was based on years of elementary teaching and recess supervision experience of this author.

## 5. Conclusion

Every elementary student in the province of Ontario has the right to have recess as documented in the Ontario education act (legislation/law). Recess is non-instructional time, a period of informal student activity usually outside of the school unless weather such as rain or severe cold dictated otherwise. One of the most useful modes to study recess behaviour is NO; to examine human behavior naturally, as subjects are unaware of observation (Lincoln & Guba, 1985). 432 (18 observations per session x 12 sessions x 2 schools) observations were completed during recess at two schools over time. The most frequent behaviour observed was communication with others (talking) and second was game playing shadowed by walking and standing.

Recess continues to be viewed as a positive break to destress from formal schooling and relax outside informally by being self-directed and spontaneous. The recess break is a developmental opportunity to build relations with peers, self-reflect and build social skills. Recess behaviours occurring least involved skipping, dancing, injuries, and conflict. Some of these finding could be linked to the large, fenced yards that accommodated students during play which had playground equipment (basketball hoops, game grids on grounds, equipment such as balls, skipping ropes), and were well maintained.

## 6. Recommendations

As a result of the inquiry several suggestions have emerged. For example, the notion that recess need be recognized, as a time to develop social-emotionally, by all stakeholders is omnipresent herein. Second, it is believed that recess nurtures problem-solving and creativity in all students therefore it should not be taken away from students (recess withdrawal for punishment or educational reasons). Recess should remain informal and unstructured opportunities for play that educators honor and respect (Hayes, 2021; Ramstetter & Murray, 2017).

Recess need be formally acknowledged to lessen student stress while increasing physical activity and improving social cohesion. Overall, recess outside boosts student concentration upon return to class which enhances learning and is a platform for social skills development.

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