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Preschool age (3-5 years) children are known for their spontaneity, high levels of physical activity (PA), and inquisitive nature. The preschool years are associated with rapid social, emotional, physical, and cognitive development. Active play is considered a form of PA for the preschooler and is also widely considered best practice for high-quality learning. Social and emotional learning (SEL) is a process of learning to manage emotions, feel and show empathy for others, establish positive relationships, and make responsible decisions. It is integral for early childhood development and provides the groundwork for future academic success.

The purpose of this project was to use a mixed methods case study to identify and describe SEL and PA behavior in preschoolers (3-5 years) during outdoor play at a local early childhood education center (ECEC). Participants included 26 children, two teachers, and the director at the ECEC. PA accelerometry data, daily observations, and formal interview data were collected over four weeks. Inductive analysis and constant comparison were used to analyze the observational and interview data.

The findings indicate that preschoolers are engaged in sedentary behavior (SB) 44.1%, moderate to vigorous PA (MVPA) 34.4%, and light activity 21.2% of the time during outdoor play. On average, the preschoolers were active for 27.4 (+/-) minutes during an outdoor session at this ECEC. Three themes were uncovered through analysis of observational and interview data including: *1) the outdoor environment provides opportunities to practice SEL, 2) social interaction during outdoor play promotes SEL, and 3) teachers support SEL during outdoor play.* The findings from this study may inform policy for outdoor play that promotes PA and SEL at the ECEC.

CAN WE PLAY OUTSIDE? SOCIAL AND EMOTIONAL LEARNING AND PRESCHOOLER PHYSICAL ACTIVITY DURING OUTDOOR PLAY

by

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TABLE OF CONTENTS

LIST OF TABLES

Page

LIST OF FIGURES

Page

CHAPTER I

PROJECT OVERVIEW

Preschool age (3-5 years) children like to play and explore, especially outdoors. Active play is considered a form of physical activity (PA) for the preschooler and play is important for early cognitive and social and emotional development (Vygotsky, 1967). However, preschoolers are not meeting daily recommendations for PA at early childhood education centers (ECECs) (Hnatiuk, Salmon, Hinkley, Okely, & Trost, 2014; Pate, McIver, Dowda, Brown, & Addy, 2008). Research suggests that when preschoolers play outdoors, they are less sedentary and more social than when they play inside (Cosco, Moore, HonASLA, & Smith, 2014; Gubbels et al., 2011; Trost, Ward, & Senso, 2010).

Outdoor play promotes learning by engaging the senses and preschoolers participate in multiple types of activities outdoors including functional (climbing, jumping), constructive (manipulating objects), dramatic (singing, stories), imaginative (pretend), sensory (touch, smell), and rough and tumble play (chasing) (Davies, 1996; Fjørtoft, 2001; Holmes & Procaccino, 2009; Zamani, 2017). Outdoor play affords preschoolers opportunities to socialize with their peers and they generally play for longer durations and at higher intensities in the outdoors (Smith et al., 2014). Outdoor play for PA supports motor skill development and bone development, benefits psychological well-being, enhances language development and problem-solving skills, and promotes social competency (Davies, 1996; Fjørtoft, 2001; Frost, 1992; Timmons et al., 2012).

Social-emotional learning (SEL) is a process of learning to manage emotions, to feel and show empathy for others, to establish positive relationships, and to make

responsible decisions (Collaborative for Academic, Social, and Emotional Learning CASEL, 2019). Positive social-emotional behavior is linked to self-motivation, goal setting, and problem-solving skills, which are age appropriate and considered fundamental for school readiness and future academic success (Bridgeland, Bruce, & Hariharan, 2013; Denham & Brown, 2010; Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011). Introducing SEL into the curriculum is recognized as beneficial for early childhood learning and development (Broekhuizen, Slot, van Aken, & Dubas, 2017; Denham & Brown, 2010; Durlak et al., 2011; Eisenberg, Valiente, & Eggum, 2010; Zins, Bloodworth, Weissberg, & Walberg, 2007). While previous research suggests that the outdoor play environment can be a desirable setting to promote play for learning, socialization, and PA, outdoor play has not been considered as a strategy to encourage refinement of SEL skills. Specifically, there is little research using direct observation for identifying SEL when preschoolers play, especially outdoors. Using observational approaches to identify and describe preschooler outdoor play for PA and SEL may be relevant and may inform policy for early childhood learning at ECECs (Halle & Darling-Churchill, 2016; Jones, Zaslow, Darling-Churchill, & Halle, 2016).

Background

Currently, 38% percent of three-year old, 76% of four-year old, and 87% of five-year old children are enrolled in a preschool, with 51% of preschoolers enrolled in full-day care (Preliminary education enrollment, 2018). PA guidelines for preschoolers suggest that they should be physically active throughout the day with caregivers encouraging active play (Piercy, Troiano, Ballard, & et al., 2018). Specifically, the Institutes of Medicine (IOM, 2011) established PA guidelines for ECECs. These guidelines recommend that ECECs provide opportunities for preschoolers to be active

for 15 minutes per hour of each day, provide outdoor activity in an open environment, and provide a combination of developmentally appropriate structured and unstructured PA. However, children currently are not meeting the IOM recommendations for PA in childcare settings (Hinkley, Salmon, Crawford, Okely, & Hesketh, 2016). Preschoolers are only engaged in active play for about 10% of the total time spent in all day care (Brown et al., 2009). Preschoolers in ECECs spend the majority of their day indoors engaged in sedentary behaviors (Cerin et al., 2016; Pate, McIver, Dowda, Brown & Addy, 2008; Reilly, 2010). Active play promotes PA, social interactions, and learning in group settings (Ennis, 2007; Fein Greta, 2006; Vygotsky, 1967). Play as a form of PA advances general movement and skill (Timmons, Naylor, & Pfieffer, 2007). Since preschool-age children spend a majority of their weekdays in some type of childcare setting, attention to the preschooler at play in the outdoor environment is necessary.

Active Play and Learning

Evidence for child's play as a form of early learning and socialization spans decades (Burdette & Whitaker, 2005; Piaget, 1926/1930). Sensory stimulation in all forms is important for early childhood learning as well as the continuous process of collecting new and building on past information (Clark, 1995; Ennis, 2007; Fein Greta, 2006; Vazou, Mantis, Luze, & Krogh, 2016). For the preschooler, learning is cultivated through free play and social interactions which can encourage the use of many SEL skills (Clark, 1995; Davies, 1996; Ennis, 2007; Piaget, 1926/1930). Additionally, active play during recess has been found to be positively associated with better self-regulation (Becker, McClelland, Loprinzi, & Trost, 2014; Vazou et al., 2016). Teachers agree that when preschoolers are given opportunities to engage in active play they benefit

physically, socially, emotionally, and intellectually (Davies, 1996; Gehris, Gooze, & Whitaker, 2014; McClintic & Petty, 2015).

ECECs were established to offer children a nurturing learning environment that supports growth and development through independent and active play (Clark, 1995; Ennis, 2007). However, time for much needed active play has decreased in recent years due to it simply not being prioritized as much as classroom-based learning (Jayasuriya, Williams, Edwards, & Tandon, 2016; Reilly, 2010). The lack of time allocated for play has coincided with a dramatic decline in PA among preschoolers enrolled in ECECs (Hu, Li, De Marco, & Chen, 2015(Vazou, 2019; Vazou, Mantis, Luze, & Krogh, 2016). The outdoor environment provides preschoolers with multiple health benefits, freedom to play, and various types of stimuli that can enrich their learning (McClintic & Petty, 2015; Miller & Almon, 2009; Tonge, Jones, & Okely, 2016).

Outdoor Play

Research suggests that outdoor play encourages more moderate-to-vigorous PA (MVPA) and less sedentary time than indoor play and an open space for freedom of movement, and children prefer it (Cerin et al., 2016; Cosco, Moore, & Islam, 2010; Holmes & Procaccino, 2009; Jayasuriya et al., 2016; Smith et al., 2014; Trost, Ward, & Senso, 2010). Stimuli in the outdoor environment can promote the use of large motor and small-motor skills and many types of play including imaginative, constructive, and dramatic (Fjørtoft, 2001; Shim, Herwig, & Shelley, 2001; Trost, Ward, & Senso, 2010). Finally, research has clearly shown that the outdoor environment is a superior setting for developing motor competency, greater cognitive capacity, increased socialization, creativity, and self-regulation which supports early childhood physical and intellectual

development (Becker, McClelland, Loprinzi, & Trost, 2014; Burdette & Whitaker, 2005; Davies, 1996; Shim, Herwig, & Shelley, 2001; Zamani, 2017).

SEL in Early Childhood Curriculum

Teaching SEL competencies in early childhood education is recommended to prepare preschoolers for primary school and has been recognized as a predictor of academic success (Denham & Brown, 2010; Zins et al., 2007). Positive social behavior, better self-regulation, academic performance, student interest in learning, and behavioral readiness for kindergarten are key benefits of introducing SEL during the preschool years (Becker et al., 2014; Bridgeland et al., 2013; Eisenberg et al., 2010; Nix, Bierman, Domitrovich, & Gill, 2013; Slot, Mulder, Verhagen, & Leseman, 2017). Early childhood educators indicate that there is a need to incorporate SEL competencies into the preschool curriculum for these key benefits (Bridgeland et al., 2013; Humphries, Williams, & May, 2018). As noted, when there are higher levels of classroom emotional and behavioral support, children's positive mood and social integration are positively associated with each other (Broekhuizen et al., 2017). Because outdoor play is preferred by preschoolers, it may be a place where they can practice SEL competencies since they are faced with real-life situations when playing with their peers.

Summary and Purpose

In conclusion, preschoolers are not meeting daily PA recommendations and many children spend the majority of their day at the ECEC. Research has provided ample evidence for play as a form of PA. It is well known that social interactions contribute to learning. The ECEC is an important setting to introduce active play as a preferred method for early childhood learning. Given that outdoor play has been suggested as particularly important for promoting PA, social interactions, and learning,

the outdoor play environment should be explored as a setting that may provide SEL opportunities for preschoolers in ECECs. Therefore, the purpose of this research was to identify and describe key SEL competencies and preschooler PA present during play in the outdoor environment at an ECEC.

Methods

This project presents a case study using mixed methods over four weeks. A case study was determined to provide a meaningful view of the preschooler at play in the outdoor environment (Creswell, 2013; Neisworth & Bagnato, 2004). Observations and conversations with the faculty, staff, and children at the ECEC were collected. In addition, formal interviews were conducted with the faculty and the director of the ECEC at the time of the beginning of the study. Researcher journaling and analytical memos were used to elaborate on written field notes taken during observations. PA data were also collected using accelerometers. The study was approved by the Institutional Review Boards (IRBs) at the University of North Carolina, Greensboro and Coastal Carolina University.

Participants and Setting

Participants included 26 minor participants (boys: *n* = 13; girls: *n* =13; 93% White, 7% African American) ages 3-5 (average age of 3.8 +/-0.69), two full-time employed teachers, and the director. However, accelerometry data for three participants were incomplete and dropped from the total PA data analysis. Additionally, there were four (one in each classroom) college student workers, regarded as “staff” in this study. Staff were not formally interviewed but conversations with the children and among the staff and researcher were documented by the researcher. There were two three-year old classes, a four-year old class, and a mixed four and five-year-old class. All full-time

teachers were certified in early childhood education. Minor participants with signed parental consent and verbal child assent were included in the study. In addition, adult consent to participate in a formal interview was provided by each teacher and the director. The program director also signed a letter of agreement to conduct research at the ECEC. Pilot work was conducted during the summer to establish a trusting relationship between the researcher and the participants prior to the study and to develop the framework for field note taking during observations.

The ECEC is located on a University campus and the outdoor play setting at the ECEC was the location for the research study. The outdoor setting is approximately 5,395 square feet (83' x 65'). Outside of the fencing there are large trees that provide shade and privacy and the playground is located at the back of the school away from University traffic. It is composed of both natural and manufactured elements. A large fixed manufactured piece with steps, two slides, and bars is located at the center of the play area. The surface is covered with mulch and there are designated stations for various types of play, including a storage shed for blocks, large blocks for climbing, and a mud kitchen. The children use the storage shed, a wooden-based structure to play hide and seek, and for imaginative play such as a "house," or as a business (e.g., an ice cream shop, pizza shop). The ECEC daily schedule allows children to receive outdoor play time for a minimum of 45 minutes in the morning and 45 minutes in the afternoon each day.

Measures and Procedures

Accelerometers were used to measure PA during outdoor play. Observations, outdoor conversations, researcher journaling, and formal interviews were used to provide a more comprehensive view of preschoolers at play in the outdoor environment.

PA Monitoring

The GT3X accelerometer (Actigraph, Inc.) was used to measure sedentary behavior (SB), light, moderate-to-vigorous PA (MVPA), and total PA (TPA) during outdoor play. The Actigraph accelerometer is the most validated and most used accelerometer for pediatric PA research (Pate, Almeida, McIver, Pfeiffer, & Dowda, 2006; Tonge, Jones, & Okely, 2016). Accelerometers were initialized at 90 Hz and at 15-s epochs (Migueles et al., 2017).

The accelerometer was placed on the right hip of the participant as he/she lined up to go outside. During this interaction, the time of day was recorded in a log diary as the class walked out to the playground. The accelerometer was removed when the participants lined up at the gate to return indoors and the time was recorded in the log diary. The time-stamped log diaries were entered into a CSV file and uploaded to the Actigraph software at the end of each week to allow for accurate wear-time and scoring analysis. Data were collected for five school days during the morning outdoor play sessions. Due to the lack of structure during the afternoon outdoor session, the afternoon session was not included for data collection. It took approximately four weeks to collect all accelerometry data for all consented participants to ensure each child had a minimum of three outdoor sessions during his/her week of data collection.

Observations

Observation of preschoolers during play in the outdoor environment was the main source of data collection. The setting, the participants, the activities of the participants (types of play, social interactions), and the process (social-emotional behaviors) occurring during observation and in conversations were detailed in the written field notes.

In the beginning of the observational period of this study, an a priori approach was used to observe specific occurrences of the five key competencies outlined by CASEL.org: 1) relationship skills, 2) self-awareness, 3) self-management, 4) social awareness, and 5) responsible decision making (Appendix A)(CASEL, 2019). The observations also followed the Schatzman and Strauss (1973) model for writing field notes which included a four-step process; 1) observation description, 2) interpretation/theoretical, 3) methodological, and 4) critical/ reflective statements. The researcher was the main instrument for qualitative data collection. The emerging codes, categories, and themes were used to describe the study's findings.

Field Notes

Observations included original quoted conversations during child-to-child, teacher-to-child, and staff-to-child interactions, which were handwritten in the researcher's journal to capture the perspective of the child, the teacher, and the situation. The conversations included questions that were asked when conflict or emotional situations would arise. These questions were directed at the faculty or staff involved in the interaction with the child and included the following: 1) What happened? 2) What did you say and the what did the child say? 3) Now, what do you expect or hope the result will be? In addition, there was often a back story to the situation. The participant involved would often elaborate on the context of the situation which was especially helpful for learning about the dynamics of a child's life that may have influenced his/her behavior.

Formal Interviews

A single interview was conducted with each of the two consenting teachers and the director. Each took place at the ECEC and was approximately 20-30 minutes in

length. The interview questions were partially adapted from Humphries et al. (2018) and from the previous pilot work. The questions included the teachers' opinions on key learning skills for preschoolers, the importance of SEL in preschool and during outdoor play, SEL and academics, and administrative support (See Appendix B for interview guide). Formal interviews were audio recorded and then transcribed along with handwritten notes taken during the interview and interviewees were given fictitious names for confidentiality.

Analysis of Data

The PA data were analyzed using Pate's criterion for preschoolers counts per minute (CPM)/4 (15 seconds for preschoolers) for sedentary 0-199, light 200-419, moderate-intensity 420-841, and vigorous-intensity 842+ CPM (Pate et al., 2006). Descriptive statistics were calculated for outdoor PA at each intensity (sedentary, light, moderate, vigorous) and total PA. Accelerometry data was used in addition to the observations of the participants at play for data triangulation and to add detail to the narrative.

Data analysis included a theoretical thematic analysis (Miles, Huberman, & Saldana, 2014). In addition, a content analysis was used for interpretation of the textual data collected from the systematic recording of observational field notes, notes from conversations, interview transcripts, and the researcher journal. Holistic coding was used for the five key SEL competencies from the predetermined framework (Appendix A). In addition, descriptive coding was used for observations. In Vivo coding (the use of direct quotes) was sourced from the interview transcripts. An iterative process of data condensation (chunking of codes) and data display (categorizing codes) led to the emerging themes.

During data collection, a coding system was developed beginning with the handwritten structured field notes. The conversations were typed into the researcher journal after morning observations. In addition to the structured field notes, the researcher's journal was also used for interpretive analysis by incorporating analytical memos. Analytical memos were critical reflections based on personal analysis and used to assist in determining the meaning of the participants' behavior and communication (Miles, Huberman, & Saldana, 2014). Memos were also used to support the structured notes. Member checking was performed by emailing the direct quotes to be used to each of the interviewees for accuracy. Initially, the coding of observations, conversations and the researcher's journal were hand-written into the margins of the field notes. After initial coding, the coding book was uploaded to Atlas.ti for further analysis (see Appendix D). Then the In Vivo coded interview transcripts (sample found in Appendix E) were entered into Atlas ti, and converged with the observational notes, and the researcher's journal (sample found in Appendix F).

During categorization, the codes from Atlas.ti were placed under each SEL key competency. The remaining codes were organized into groups based on the repetitive and interconnected associations to each other. This led to the development of two additional categories. Detailed data displays were developed during the process of categorizing of the codes. See Appendix G for the first and second data display for coding and categorization.

Categorizing the codes led to the assignment of themes which can be found in the final data display in Appendix H. After the researcher revisited the notes from the journal and the interview transcripts, peer debriefing with a colleague assisted in defining

the themes. Each theme was labeled based on the researcher's interpretation of how the observations, conversations, and the interviews addressed the aim of this study.

To establish trustworthiness, the following credibility checks were utilized as recommended by (Miles, Huberman, & Saldana, 2014). Presenting the interpretivist positionality of the researcher (instrument for observation and interviewing) (Miles et al., 2014), triangulation of the findings through thoughtful interpretation, and peer debriefing of the data with colleagues was aimed at meeting confirmability. Dependability was established by describing the participants and the setting, and demonstrating there was a connection between the findings and the literature. Credibility was established in this study by spending extended periods of time in the setting, describing the setting and context through observational field notes, field notes from conversations with the teachers and among teachers and minor participants, conducting formal interviews with the teachers, member checking (teachers and director) the data, and using PA data to add physical dimension to the findings. Transferability is difficult to establish in this study. However, rich description of the participants' behaviors and of the setting, merged with the formal interview data were considered meaningful and potentially useful to make conclusions to share with other ECECs and early education stakeholders.

The overall goal was to describe preschoolers' patterns of play, behaviors, and communication during outdoor play. The researcher, a mother of a preschooler, an educator, and an advocate for PA and SEL had an existing genuine interest in the physical and intellectual health of the preschool child. Background knowledge coupled with the conversations during this observational study have reinforced the personal position of the researcher that is guided by the theoretical principles of educational authors including Vygotsky, Piaget, Malaguzzi, and Montessori. These principles

underlie the mission of the ECEC and advocate that child-centered, active learning is embedded in the curriculum. The findings from this study will be presented based on the researcher's personal interpretation of the participants' voices, original quoted conversations from observations, and formal interviews. For the entire biography, see Appendix C.

Findings and Discussion

This section includes both the quantitative and qualitative results of the study with an introduction of the PA data first (i.e. accelerometer and observations). Then each of the themes are presented with examples from observational and conversational data, original quotes from the formal interview, and the association to the literature.

Accelerometer-Derived PA

There was an average of 4.2 (3-5) outdoor sessions of PA data collected. Descriptive statistics were run to determine intensity and duration of PA during outdoor play. Data from all four classes combined showed the average time spent outdoors during the morning session was 48.9 (7.6) minutes.

Table 1

Mean PA Participation During Outdoor Sessions

	SB (SD)	Light (SD)	MVPA (SD)	% Sed	% Light	% MVPA	Outdoor Time (SD)
4-5 yr	21.3 (5.6)	8.7 (1.7)	13.2 (5.1)	49.2	19.8	30.8	43.2 (4.1)
4 yr	21.5 (5.6)	9.2 (0.9)	13.3 (4.8)	47.5	20.9	30.6	44 (2.1)
3 yr (A)	21.6 (4)	10.2 (1.1)	16.9 (5.4)	43.8	20.9	35.3	48.7 (2.1)
3 yr (B)	21.4 (3.6)	13.9 (1.2)	24.5 (3.6)	35.9	23.3	40.7	59.8 (0.7)
All	21.5 (0.1)	10.5 (2.4)	16.9 (5.4)	44.1	21.2	34.4	48.9 (7.6)

*Intensity columns reflect minutes relative to total outdoor time.

Preschoolers were engaged in SB 44.1%, MVPA 34.4%, and light activity 21.2 % of the time they were outside during the morning session. The findings from this study indicate that participants were considerably engaged in more MVPA than those from previous studies. The reported mean levels of MVPA and SB during outdoor play from past research indicate that MVPA ranged from 17% - 21.3% and SB ranges were 31.2% - 49.3% (Brown et al., 2009; Gubbels et al., 2010; Hannon & Brown 2008). When combined (MVPA and light PA) the participants in this study were active 27.4 minutes during outdoor play in the morning session. Research indicates that most ECEC children are only engaged in daily MVPA for an average of 27 minutes (Henderson, Grode, O'Connell, & Schwartz, 2015). Additionally, outdoor time exceeds IOM recommendations and the 30 minutes per session recommendations for outdoor play at the ECEC (IOM, 2011; Tandon, Saelens, & Christakis, 2015). Based on observations from past pilot work at this ECEC, the participants often spent much more time outdoors during the afternoon sessions. Thus, they may have been even more active than evidenced in the measures, since data collection was limited to morning sessions. Overall, the data suggest that the children were active (light, moderate, or vigorous) for more than half of the outdoor session, with roughly a third of that time engaged in MVPA.

PA Observations

Observations of PA complement the accelerometry data findings that preschoolers move around frequently during outdoor play. They were observed chasing, running, jumping, and dancing. At times they were so intently engaged in an activity (exploratory play or imaginative play) that they were observed standing, sitting, or

squatting for minutes at a time. Then, almost impulsively, they were sprinting across the playground to share in the joy of a friend that found or built something spectacular.

Observations and PA data showed that children were spontaneous and unpredictable, and some were more active than others. Some children new to the ECEC were observed to be less active, preferring to stay close to teachers or staff. During conflict, in some situations, the child would be asked to sit out for a few minutes and a conversation between the teacher and the child would occur. These findings complement others suggesting that the outdoor environment promotes social play and various types of play patterns that are considered important for learning (Becker et al., 2014; Cloward-Drown & Christenson, 2014; Fjørtoft, 2001; Miranda, Larrea, Muela, & Barandiaran, 2017; Slot et al., 2017).

Thematic Analysis of Observations and Interviews

The triangulation of data led to each emerging theme. Table 2 provides a visual of the coding process. Structural coding led to three of the five key SEL competency codes. In Vivo and Atlas.ti coding led to the development of two additional categories and ultimately the 2nd and 3rd themes.

Table 2

Codes Used for Developing Categories (# of times coded)

Codes	Category	Theme
Relationship Skills (64) Social, Socialization Conversation (69) Friends, Group play (75) Conflict, Behavior (45)	*A. Relationship skills*	
Self-awareness (32) Expressing, Emotions, Feelings (115) Interpersonal, Internalize, Interpret (18)	*B. Self-Awareness*	1. Outdoor play provides opportunities for SEL
Social awareness (62) Kind, Empathy (42) Awareness, Friends (48)	*C. Social Awareness*	
Play, Playground, Playing (135) Childhood/Children/Child (73) Learn, Learning, Learned (59)	*Social Play and Learning*	2. Social Interactions Promote SEL
Teacher, Teach, Taught (120) Needs, Needed (45) Help, Support (43)	*Teacher Support*	3. Teacher behavior can Support SEL During Outdoor Play

Theme #1 Outdoor Play Provides Opportunities to Practice SEL

Multiple opportunities exist for preschoolers to practice what they have learned in the classroom during outdoor play. Sharing building blocks, taking turns running across a bridge they constructed from playground equipment, and learning that filling a bucket with water and carrying it to the slide created a water slide are examples of activities that demonstrated key relationship skills such as cooperation, listening, negotiating conflict, taking turns, and seeking help. This was the most dominant theme present during outdoor play.

The participants' communication and conversations during play also revealed the key competency social awareness (understanding each other and demonstrating empathy). Using "kind words," "gentle hands," "being a good friend" and saying "I'm

sorry," were phrases often heard on the playground. A staff member commented that the outdoors is "their place." She said, "They are comfortable out here. They are limited in the classroom. They fight more - they go to the teacher more." When the children were outdoors, often unprompted, they would often show acts of kindness and empathy for their friends.

The competency self-awareness (identifying emotions, self-confidence) was also commonly observed during outdoor play. Teachers and staff commented that the children showing emotional outbursts on the playground outside often exhibited the same behavior inside. During one interview, one teacher, Jamie said, "it messes their whole day up if they haven't learned how to manage their emotions yet. However, when they have learned this skill, they can turn it around." Research suggests that such emotions can facilitate or impede children's learning (Durlak et al., 2011; Zins et al., 2007). Therefore, when children learn to manage their emotions, they have fewer problems outdoors and are likely to be more successful in the classroom. During the interview, teacher Jamie said, "it is so powerful to watch when they figure it out. They take what they learned inside, outside. You see it happening. It's a total parallel." During the interview, the former director, Linda also stated that the children use what they learn in the classroom in the outdoors, "often acting out through characters they learned about in a story." Other research has shown that during social and physical play outdoors children can acquire and use the skills learned prior in the classroom to make decisions, solve problems, and manage situations that arise (Ennis, 2007; Burdette & Whitaker, 2005; Durlak et al., 2011; Humphries et al., 2018; Piaget, 1926/1930; Rovegno & Bandhauer, 1997).

Theme #2 Social Interactions Promote SEL

During outdoor play, the participants engaged in tasks that required social interactions such as, carrying, building, designing, and cooking. Consistent with previous research, social interactions were common during group play (Burdette & Whitaker, 2005; Hoskins & Smedley, 2018; Shim et al., 2001). Groups that were frequently observed playing together were labeled by their types of play (as defined earlier), which included the "rough and tumble," the "imaginative and dramatic," the "constructive," and the "experimenters" (Davies, 1996; Fjørtoft, 2001; Holmes & Procaccino, 2009; Zamani, 2017). There were many situations during group play when managing conflict and solving problems was needed. It was common to see the participants helping each other. During the interview, Linda explained that when they practice outside, "I try not to get too involved directly with the children as if I did, I would distract them from what they are doing and that is not natural." Teachers from other studies have also suggested the importance of not interrupting children at play (Hoskins & Smedley, 2018). Research suggests when play is unstructured, children are more freely able to participate in dyadic and/or group play (Miranda, et al., 2017). These interactions prompt them to practice SEL competencies as "real-life" situations often occur on the playground (Campbell et al., 2016; Durlak et al., 2011).

During social interactions, it was observed that participants would model the behavior of their friends or those from characters they had learned about in the classroom. Linda said that when they do this, "they use the character as a safe way to express their emotions." The use of characters for modeling good behavior has also been referenced by other teachers (Humphries, et al., 2018). Often teachers at this ECEC would ask the more social and emotionally competent children to play with

“friends” that were “having a bad day.” The literature endorses that both children benefit from this positive social interaction and children who are more socially developed often have more positive relationships and social interactions (Burriss & Burriss, 2011; Denham & Brown, 2010: Vazou et al., 2016). Therefore, encouraging social interactions among children was seen as a useful strategy for SEL on the playground.

Theme #3 Teacher Behavior Can Support SEL During Play Outdoors

The teachers at this ECEC stand in various places of the playground so they can be a trusted resource for the children when they are unable to articulate their feelings and/or manage their emotions. Jamie said, “it’s constant mediation out here.” In the interview she elaborated: “they're little people and they need that help and guidance and eventually they'll learn to do it by themselves.” The literature complements these findings that the supportive role of the teacher is appropriate to pervade SEL into multiple aspects of the preschoolers’ day (Broekhuizen et al., 2017; Eisenberg et al., 2010; Hoskins & Smedley, 2018; Slot et al., 2017; Zins et al., 2007).

Research suggests that providing a trusting environment opens the opportunity for children to express themselves, and “conversations” provide children the opportunity to use their voice (Association for Supervision and Curriculum Development (ASCD), 2019; Durlak et al., 2011; Humphries et al., 2018; Shim, Herwig, & Shelley, 2001). Teachers at this ECEC would squat down to the child’s level to communicate with a child. However, some teachers and staff used a more directive approach (terms such as, “no, don’t do that,”), were more dismissive (“you’re fine, go play”), or used “time-out” as discipline. During the interview Linda commented that, “this is a disservice to the child. How do they learn their language if they are not allowed to speak?”

Consistent with the research (ASCD, 2019; Bridgeland, et al., 2013; Gehris et al., 2014; Humphries et al., 2018; McClintic & Petty, 2015) teachers at this ECEC support the importance of integrating SEL into early childhood curriculum and believe it should be prioritized. When asked during the formal interview, one teacher, Amy, said the following:

> I think that if a child can socialize with his or her peers and learn to be a good friend and a good role model, then I think that's far more important than the academic piece, because these are skills that will carry them through life, and I think that they should be established and set early on when they're young.

Jamie also appreciated this flexibility. She said, “it's refreshing because you want to do what is appropriate for children and that's all.” Survey from a national teacher survey also indicated that children needed this foundation of learning before academics (Bridgeland, Bruce, & Hariharan, 2013).

Conclusion

Children engage in substantial MVPA during outdoor play at this ECEC. Outdoor play positions them in situations where they need to lean to manage conflict, engage in teamwork, and develop relationship skills. The children at this ECEC may be meeting daily PA recommendations (Tandon, et al., 2015) as they gain a significant portion during the morning session alone, and they are exceeding 15 minutes per hour of PA as recommended by the IOM when they are playing outdoors (IOM, 2011). This is encouraging for SEL and PA policy, as opportunities for both are present in the outdoor environment (Boldemann et al., 2006; Fjørtoft, 2001; Hoskins & Smedley, 2018; Laboy, 2019; Lu & Montague, 2016; Miller & Almon, 2009). This study supports the research that the outdoor environment promotes freedom for play and children prefer it (Burdette & Whitaker, 2005; Fjørtoft, 2001; Hoskins & Smedley, 2018).

CHAPTER II

DISSEMINATION

Dissemination of the findings of this research study are worthy for informing many interested stakeholders. However, I have determined that a report to the parents of the children enrolled in the early childhood education center (ECEC) included in the study will be my primary and first medium to share the findings of the dissertation. Therefore, this report will be sent via email to all parents of the children even those who did not participate in the study. The report will begin with a thank you note. It will include a brief review of the literature, a review of the study, and the findings from the study. Additionally, rationale for the research and how this research will inform other ECECs will be included. The report will inform parents about my intent to take further action and promote the findings to multiple organizations related to PA and early childhood education. The report will also include my contact information for questions related to the study.

A Letter to the Parents

To the parents of the participants of the study titled: Can we Play Outside? Social and Emotional Learning and Preschooler Physical Activity during Outdoor Play

I, Marcia Rosiek, would like to thank you for allowing me, a Coastal Carolina University Lecturer and a UNC at Greensboro doctoral candidate to conduct research with your child. I also appreciate the sincerity of the staff (including the new faculty and staff) and the children as participants for research. I appreciate your commitment to this important research study. Observations and interactions with the children have provided

me with greater insight into social-emotional learning for the preschooler at play in the outdoor environment. In the words of Jean Piaget, the goal of education is not to increase the amount of knowledge but to create the possibilities for a child to invent and discover.

Reasons for this Research Study

The purpose of this study was to identify and describe key social and emotional learning competencies and preschooler physical activity present during play in the outdoor environment. I addressed the aim of the project by using both observational data (collected from field notes) and interview data from the teachers included in the study. There are five key competencies of social-emotional learning including 1) relationship skills, 2) social awareness, 3) self-awareness, 4) self-management, and 5) decision making. These competencies are fundamental for early childhood learning and underscore the ability to make good decisions, build positive relationships, and regulate emotions so they can effectively solve problems. Social and emotional competencies are known to better prepare preschooler's for primary school and are linked to future academic achievement. Research suggests that play, as a form of physical activity is important for developing motor competency, greater cognitive capacity, increased socialization, creativity, and self-regulation which supports early intellectual development and social and emotional learning.

Additionally, play is the preferred form of physical activity for the preschool-age child. Research suggests most preschool children are not meeting recommendations for physical activity in early childhood education centers (ECEC). However, the guidelines for physical activity include that the ECEC provide opportunities for preschoolers to be active for 15 minutes per hour of each day, provide outdoor activity in an open

environment, and provide a combination of developmentally appropriate structured and unstructured physical activity. Therefore, I also measured physical activity using the "belts" to determine how physically active during children were during their outdoor play time. The findings from this research study are detailed in this letter.

Children Refine Their Social-Emotional Skills During Play Outdoors and With Each Other

I found that the children are exposed to multiple social-emotional learning opportunities while playing with their friends in the outdoor environment. The children are using those skills learned in the classroom and practicing them during various types of outdoor play! This practice allows children to refine these key competencies that build the foundation for higher-order learning. It certainly is, "powerful to watch" (a direct quote from one of the teachers). During one of my observations, a staff member commented, "this is their place. It is their (the children's) place to be free, to be their selves."

My observations also found that the children are good at developing and maintaining relationships with their "friends." They are also being supported by the teachers and staff at the center. In my opinion, the most important finding was that the children refine their social-emotional skills during play with each other. Cooperation, showing empathy toward each other, and being a good friend are commonly observed on the playground. I have often heard them encouraging their friends. It was interesting to me to see how well they solved problems on their own, without interruption from the teacher. This is highly important for their learning!

Teachers Support Social and Emotional Learning During Outdoor Play

My second most important finding was that the teachers and the staff show respect for the children as everyone at the center is considered a "friend." Research

suggests there is a positive association between teacher emotional support and children's positive mood. When children have a sense of belonging, it promotes classroom engagement. They are being nurtured and being taught each of the five key competencies of social-emotional learning, which are being reinforced on the playground. The former director of the Early Childhood Development and Literacy Center (ECDLC) said, "when we're in the classroom, oftentimes the teacher is in charge of the learner or creates the experience, when children are outside, they have free rights." Before doing this study, I thought that teachers used outdoor play time to take a break. However, I learned that they are out on the playground and available when children need them. Most importantly, the teachers allow the children to be themselves in their place. In an interview one of the teachers said, "it's so powerful to watch because they'll learn without (us), you know? If they hurt somebody accidentally, they'll say 'I'm sorry.'" My conclusions from the interviews with the teachers were that they value social-emotional learning, child-centered learning, and they believe that the children are "capable" of learning these skills as they are often considered important to introduce before primary school.

The children are active! Results from the physical activity data collection suggest that on average children are engaged in physical activity 55% of the time during the morning outdoor play session. This means that they are active about 27 minutes during their average 49-minute outdoor session. My observations complement these findings as there are situations I have witnessed where a child can be so intently engaged in some form of play that facilitates learning that they may be standing or squatting for a few minutes then they sprint across the playground to meet a friend who has found something cool. As you already know, during the afternoon (weather

permitting) they are allowed to play until you come to pick them up. Therefore, it is believed that they are getting an appropriate amount of physical activity in the outdoor environment each day and they are refining social-emotional skills, while still enjoying the freedom to be their creative selves.

My plan to share these findings. My plan is to disseminate these findings to various interested stakeholders. First, I am writing a news release for the ECDLC. I will use the release to inform other early childhood education centers. The information I have shared with you will be shared with educational organizations such as the National Association for the Education of Young Children (NAEYC), an early childhood education program established to promote high-quality early childhood learning, the Association for Supervision and Curriculum Development (ASCD), and the S.C. Department of Health and Environmental Control (SCDHEC) that publishes physical activity, nutrition and obesity information for the state. Recently, the ASCD partnered with the Centers for Disease Control (CDC) to develop the Whole School, Whole Community, Whole Child model. This organization uses a framework to promote active efforts to connect learning and health for children through a healthy and supportive school environment. For more information, visit http://www.ascd.org/publications/educational-leadership.aspx. I plan to reach out to these organizations to inform policy for ECECs, which includes advocating for the prioritization of outdoor play time for preschoolers to promote whole child development. In addition, I plan to present the findings of this project at a National conference to my governing organization, the American College of Sports Medicine (ACSM) in May of 2020 (acsm.org).

Let them PLAY! Finally, I want to thank you again for your participation. Because of your willingness to help, I can continue to advocate for “play” especially

outdoors as essential for our earliest learners' growth and development. The current body of literature in early childhood education suggests that a curriculum focused on active play and social and emotional learning provides a foundation for higher-order learning and future academic success. This research coupled with my experience in two preschools (and as a mother myself) has led me to believe that we must allow our preschoolers ***ample time for play, provide them with a trusting environment, and most importantly, we should listen to their voice***; "they are ***intelligent*** and (they) ***very much deserve our respect***" (original quote from the former director). Please keep the attached infographic for your home.

Thank you, again, it was a pleasure.

Marcia Rosiek

Figure 1

Infographic for Parent Use

CHAPTER III

ACTION PLAN

This dissertation has practical implications and provides valuable information for many interested stakeholders. University scholarship implies the sharing of new knowledge. Therefore, it is my purpose to share the findings of the project with the public, including the parents of the minor participants. I will also prepare a report for the ECEC where the project was completed. Then, I will send a brief summary of the project to the College of Education at the University campus where the project took place. In addition, the findings from this dissertation can be used as a resource for other educational organizations that educate, engage in research, and inform policy, such as those listed below in this chapter. These organizations have the ability to reach other ECECs regionally and nationally. These organizations may influence other ECECs to evaluate their programs and consider adopting some of the strategies listed here.

Early Childhood Education Center (ECEC)

The findings from this project convey a comprehensive view of preschooler play as a form of PA and SEL. This information is considered important for many interested stakeholders, including preschool administration. First, I plan to maintain the interdisciplinary relationship that has been established with the College of Education at this University by sharing the results of the dissertation with the college. In addition, I will immediately share the findings to this ECEC and to the ECEC's where I have established relationships in a report similar to the one submitted to the parents of the

participants in this project. In this report, I will recommend outdoor play for both PA and SEL to administration for policy consideration and provide them with the research that complements my findings. I would like to continue research on the modification of existing outdoor play environments as an option to promote healthy behaviors and early learning in preschoolers, as I have for this ECEC.

Garnering the support of teachers and administration is essential for progress in early childhood education since teachers are in direct contact with the children and their parents, are considered to be a support system and serve as a role-model for children (Broekhuizen et al., 2017; McClintic & Petty, 2015). Therefore, I will share the same report with the teachers at the ECEC. In addition, I will share my contact information for questions.

Publication and Future Research

To contribute to the existing body of research on outdoor play environments in preschools as well as research on SEL for preschoolers, upon completion of the dissertation, I will prepare a manuscript for publication. I will submit my work to a journal that publishes research in early childhood education. An important task will be to determine the type of journal that the dissertation could potentially reach and submit to the journal with the broadest reach. The manuscript will conclude with practical application and future implications aimed at the need for more direct observational research studies to add to this study as well as and others. Based on early research related to the dissertation, journals that will be considered include the *Journal of Early Childhood Research, Early Education and Development, Journal of Applied School Psychology, or Early Childhood Development and Care*.

The methods I used can be replicated in various early childhood education settings including kindergarten. My next research plan is to use this project's methods and compare other ECECs and kindergarten classes from different schools to further describe outdoor play and SEL in other school environments. I plan to continue using observational and direct measurement to research outdoor play and PA, outdoor play environments, and SEL in ECECs.

Communication to Stakeholders

I plan to request to join the HELLO interest forum for the National Association for the Education of Young Children (NAEYC), an early childhood education program established to promote high-quality early childhood learning ("Strategic direction," 2018). By joining this forum, I can share my findings from this study and connect to other members involved in this medium. Submitting my findings to the NAEYC will provide information that can be used for those in teaching, policy, and the development of standards in the national educational community. This organization is an accrediting agency for preschool facilities. Therefore, it is possible that my research can contribute to the mission of the NAEYC and will be used to inform preschool administration and teachers in early childhood education. The NAEYC also offers professional preparation and development as well as access to NAEYC's resources. Therefore, I believe my findings may be viable for other ECECs to use.

The S.C. Department of Health and Environmental Control (SCDHEC) is another organization to which the dissertation findings will be disseminated. This public forum publishes physical activity, nutrition and obesity information for the state. SCDHEC works with partners across the state to change policy and environments in an effort to promote healthier lifestyles (SCDHEC, 2018). I will submit a report of my findings to this

organization as a contribution to the organization's efforts to inform local ECECs of the benefits of outdoor play for both PA and SEL.

The Association for Supervision and Curriculum Development (ASCD) is an organization that partnered with the Centers for Disease Control (CDC) to develop the Whole School, Whole Community, Whole Child (WSWCWC) model. This organization provides multiple resources for encouraging educators to use active efforts to connect learning and health for children through a healthy and supportive school environment. My findings are important for both the Education and Kinesiology disciplines. Therefore, I plan to email a brief release that highlights my research to support advocacy for student success, and I will also volunteer to present for any associated webinar to introduce the findings from this project.

It is my long-term professional desire to begin working on a Department of Education Charter Schools Program (CSP) grant to open and assist in operating a program for an early childhood charter school. My plan is to seek a position on the board while also being a consultant for the charter school. I plan to continue to engage with my community to reach area schools and provide them with additional resources and opportunities to be active in the community by attending events that are related to my research. In this role, I will partner with the College of Education on campus to speak in a public forum, specifically one that is aimed at early childhood education. Finally, I would like to develop interventions that improve outdoor play spaces for preschools and primary schools. My plan is to continue to engage in the research and share my knowledge with the public, but most importantly my personal quest is to advocate for more outdoor play for all children

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APPENDIX A

SOCIAL AND EMOTIONAL KEY COMPETENCIES FRAMEWORK

	Observation/ description (statement of observation)	***Interpretive/ theoretical*** (interpretations that emerge from observation)	***Methodological*** (notes from observation; ask teacher, question emerges, what to look for next)	***Critical/ Reflexive*** (bias, knowledge, school context)
relationship skills				
self-awareness				
self-management				
social awareness				
responsible decision making				

APPENDIX B

TEACHER INTERVIEW QUESTIONS

1) I have noticed that you and your interns refer to everyone (children, faculty, staff) as friends. Where did this come from?

2) I have noticed that SEL is embedded in your curriculum, what are the key learning skills children should develop in preschool?

3) Do you believe teachers should reinforce social-emotional learning in the curriculum? Why?

4) How much importance do you place on reinforcing SEL during outdoor play? Can you provide an example?

5) Do you visualize outdoor play as an extension of classroom learning?

6) Can you provide an example of how SEL benefits them academically?

7) Your general thoughts about administration support.

APPENDIX C

RESEARCHER PERSONAL BIOGRAPHY

My positionality will show through this work as I have described my observations and conversations through my interpretation. My responsibility is to provide a truthful and vivid description of the experiences I encountered in the outdoor play environment at the early Childhood and Development Center (ECDC). I do want to make an argument for play as an appropriate age-related learning experience for preschoolers. In the words of the director, I agree that "the safer they (the children) feel at school the more they learn to regulate their emotions and that makes them more successful in the future." This was one of the most noticeable strategies I observed on the playground. I was immediately enamored with the tactics the director, teachers, and staff used with the children. First, they would ask the child what happened and then they would refer to being a good friend. For example, I heard statements like, "well, maybe Thomas (fictional name) was not being a good friend." "Do you think you were being a good friend?" "Let's go talk to Thomas." When I would return to my office I would write in my journal and I noticed that this language was all around me. It was in the podcasts I listened to, in the webinars I attended, and it has been in the literature for many years.

I am an outspoken advocate for regular physical activity for all populations because I strongly believe the physical, mental, and intellectual benefits are worthy of sharing with the public. Although academics are prioritized, it is agreed that SEL should be at the foundation for learning to support future learning and academic achievement. Children at this age must be allowed access to the appropriate resources for physical growth and development and the ECEC is a setting where children spend a majority of

their time. Recommendations for PA for preschoolers is for them to be active for most of the day and since they learn through play and it is considered a form of PA, then it seems reasonable that the additional benefit of the outdoors, “their preferred place to play” should be prioritized. I believe preschoolers should be given the opportunity to engage in active play as a form of PA, for social interactions and for learning. As a parent, I wish for my child to have the opportunity to enjoy learning by providing her multiple types of experiences; social, creative, and explorative. I know the key to this is to provide her with her own sense of self and give her time to play with her friends and this is why she is enrolled in the ECEC.

The purpose of this exploratory research was to identify and describe PA and SEL during play in the outdoor environment. The only relationship I had before beginning this project was that I had a small part in assisting the director with the design of the playground and that my daughter was going to be enrolled at the center. I was not sure what to expect when I began this study and was pleasantly surprised that this case study had findings that were complementary to other research studies conducted in preschools on SEL. I was familiar with the mission of the center, but I certainly did not expect that I would see it being practiced in the setting to the extent that it was. I was not sure that the interviews would match the observations and the research on SEL would corroborate the findings. However, what I found was this dedication to SEL. During the interviews there were two statements that demonstrated this commitment to teaching SEL and the benefits to the children as a result.

Linda:

If you don't give them a voice, they never learn to use it. The more we give children the language to process emotions the more likely they are to find a resolution to that which directly impacts their ability to focus through and their ability to do work with their peers. They all just go together.

Jamie:

I can tell the difference, honestly. They sometimes need the help. You cannot ignore them, that doesn't help. You have to support them. It's powerful to watch as they learn after you have gone over it in class and then see them use it on the playground.

I immersed myself into this environment and was able to see so much more than I had envisioned. I expected to see teachers taking a break while the children played. However, they were out there on the playground serving as a resource for children when needed. They were actually reinforcing the SEL competencies that they were teaching in the classroom. This was a very similar strategy that I noticed while conducting research in another preschool in 2018. Both ECECs prioritized outdoor PA. There were many days the teachers stayed outdoors beyond structured time for outdoor activity. Many teachers commented that they did this because the children enjoyed it and they knew they needed it.

Because I noticed this type of teaching in the ECEC in 2018, I wanted to learn more about SEL and if it existed in other preschools. It was apparent to me that in both facilities there were teachers that seemed to have an innate ability to communicate effectively with the children, while others were honing their own style of teaching. I noticed a sophomore student worker at this ECEC that demonstrated the same approach to communicating with the children as did the director. Therefore, I would suggest that teachers/staff that already have some background (innate or trained) in

SEL, may be able to apply some of that knowledge to help other teachers and staff at any ECEC. As the director of this program mentioned earlier, sometimes the teachers pick up on it by being around others using it. As I have suggested in the dissertation, there are multiple resources available. Therefore, it seems possible that teacher training, in some form, can be implemented. In addition, play allows opportunity for practice for these children in what I believe they consider their “free world.”

I certainly learned from my time at the ECEC and I now apply some of the concepts I learned in my role as a parent. In addition, I have read the research, I have listened to podcasts, and I have attended workshops and webinars on SEL. I support the research, the teachers that I have spoken with, and the two directors of the two ECECs I have worked with in the past two years. In addition, as noted by the director, teachers, and the research, while academics are important, play for learning and physical growth and development is invaluable at this age.

APPENDIX D

OUTDOOR SESSION FIELD NOTES

Observation/ description (statement of observation)	***Interpretive/theoretical*** (interpretations that emerge from observation)	***Methodological*** (notes from observation; ask teacher, question emerges, what to look for next)	***Critical/ Reflexive*** (bias, knowledge, school context)	
Girl and boy disagree on food they are making	Boy wants pizza, girl cookies. They are playfully disagreeing.	Interesting that girl tells boy the food she is giving him is pizza and he says, "ok" Then she says, it's really cookies and he throws it out, she smiles	Playful and healthy way of managing conflict	***relationship skills***
EC blamed for hitting another child on playground	difficulty recognizing emotion on playground when blamed for hitting another child	Staff-SW responds by saying, "I can tell when EC is lying" What made her think so and why did she respond in this matter.	Another boy admits to hitting the child. Teacher apologizes to EC. EC goes to play. Knowledge of SEL may have been more appropriate in this situation, allow child to express his emotions.	***self-awareness***
Boy is pushed in pool.	Boy that pushes does not display any emotion- remorse.	Why did he push the other boy? He is acting out on his frustration, because they did not appear to be in dispute? When approached by teacher, boy admits to pushing other boy. Still no emotion-remorse.	Engaging in social development tasks positively (Denham & Brown, p 654). Potentially acting out- Monday, return to preschool schedule after	***relationship skills***

			being home several days.	
Boy with gray shirt is destructive, knocking built construction	Is this something he does daily? Watch for this behavior	Noticeable that children will tell on him but, some will ignore him and leave the scene.	managing emotional arousal (Denham & Brown, 2010) p 654)	***self-management***
When EC is hit by another child	A group of 2-3 children come to support him.	They work together to problem solve and show empathy for EC	Active listening, problem solving (Payton et al., 2000) Children are listening to him, he is being understood. KEY SEL competencies	***social awareness***
Group of boys playing well together.	These boys play together daily, constructive play. They display many SE qualities, such as cooperation, help, showing empathy.	Do the boys ever argue? Yes, sometimes one boy can be sort of a trouble maker. We usually know who. What is the situation in the classroom?	It does appear that some children are less aware of their behavior. This is likely common. The ECEC is to facilitate the development of these skills. These again, may have to do with modeling.	***relationship skills***

Abbreviations key

SEL key Competencies	Other Codes:	Other references:
SA- social awareness	Adj- adjustment	Solo play
RDM-responsible decision making	External (Family) problems	GP- group play
IA- self-awareness	Admitting fault	Overcome easily- no hard feelings (OE)
RS- relationship skills	Apply SEL	Same friends
SM- Self-management	TI-Teacher intervenes	Modeling
PG- playground		

Example of coded statements

Observation/Communication	Code
"**get your green one, it's your favorite**" two boys having conversation while playing together.	SA
New (3yo) boy adjusting likes the girl that was asked to play with him on his first day. He prefers to stay by her side.	SA
"I think we have a problem." One boy runs over to help the other boy. Together they work to move water out of pool that was left over from water day, the day before.	SA
-Older kids playing with younger kids—Each learning to share and that nothing is "theirs" Two begin to argue over toy. Teacher intervenes and they begin playing alongside each other.	RDM TI
A boy is collecting rocks and passing them out to children on the PG	SA
Time-out is a common form of discipline on the PG	"Time-out"
Teacher speaks in quiet voice- encourage a reciprocal response	Modeling
Group of three boys building blocks together	RS
"Let's find another shield"	SA, RS
2 boys arguing over toys- one says "we need to take turns	RDM
Share, ask nicely	RDM, SM
Group play, R & T boys- bring in new 5 yo	SA
Construction boys	GP
"Who wants to blast a meteor shower?"	GP, IA, RS
Boy gets in trouble for hitting frequently, teacher "did you hit your friend?" "no" "please do not hit your friends" ok.	Admitting fault OE
Group play 3 boys	RS
Girl plays alone, but not unhappy, does frequently	Types of play
5 yo that destroys the boys constructing house.	Destructive **New enrollee**
Rough and tumble, constant movement, only in trouble when one or other gets too rough.	GP RS RDM
5 y/o **new enrollee, throwing mulch**	adjustment
Child moves arm out in way of child, hits him, child tells, boy denies then later accepts responsibility	OE Admitting fault
The three girls always playing with each other, type of play **dramatic**	GP
after a child observed another child doing the same as **modeling** is common on the playground. I was standing next to the teacher and she said, "it's constant mediation out here."	TI, IA
One boy walked up to her and complained about a girl not sharing	RS, TI
Student employee A.	Proactive

She was an **inherently nurturing role model** to the children. She was loved by children from other classes. I have observed her on multiple occasions reach out to children in need of social-emotional reinforcement. She is **proactive to help children problem solve**. For example, I once observed her go to speak with a boy that was playing alone and seemed down. I asked her what she said to him and she said, "**I asked him what was wrong and suggested that he could play with another boy on the playground and showed him this boy over here**. I led him to the other boy and asked the other boy if he would play with him." **Teacher B** This teacher was a new hire for the fall semester of 2019. She is much more hands-on then other teachers on the playground. She is **quick to instruct them on what they are doing wrong**. For example, climbing up the slide instead of going down. She will intervene during a conflict and ask children to be nice to their friends. She is not the hand-holding type, **more firm and direct** than some other teachers. She often stands over the children instead of leaning down to be on their level. **Teacher C** She is inhibited and quiet. She keeps her eyes on the children and intervenes when she feels it is necessary. She will lean down to get on their level. Additionally, teachers, or teaching strategies may compromise student SEL (Payton et al., 2000). She has also been observed hugging and hand-holding children.	Values SE approach Nurturing Caring Supportive Loved Watchful eye, Cold Don't No Firm Direct Interfering Quiet Reserved Steps in when necessary Provides SE reinforcement
"Friends" This was noticeable especially with the boy whose friends left to start kindergarten. He had a difficult week the week **he returned and his friends had left for kindergarten.** He cried about his friends being in kindergarten, asked when he would be able to go to kindergarten, and he was observed as being overly clingy to the teachers, the researcher, and other volunteer visitors. **He was sedentary for the first three days at the center**. By the fourth day, he was observed as being more active, but still a bit clingy. Over the course of the next few weeks I watched him make friends. He is still not the most active child but he was no longer spending most of his outdoor play time crying.	SM, SA, IA, Adjustment I'm all alone No, I'm not alone I made new friends
I often observed **three boys engaged in construction** type activities.	Relationship skills
There was one child I wrote about on numerous occasions. She was three. Her way of managing the adjustment was to cry. She would try	Adjustment, 3-year-old, crying

to play alongside others, but often something would happen and she would cry.	
The **rough and tumble boys were always running**, they ran through various stages of the playground but, they were also found to be playing with other children as well. There was a group of "three" girls that were often observed engaged in dramatic play. While all of these groups played differently, they were all engaged in situations where they were establishing and maintaining healthy interpersonal relationships and managing any group related conflict either on their own or with the support of the teacher.	Group play Relationship skills Positive relationships
I remember sitting on a block one day while my "three-girls" were singing on their stage. This particular day was nice, the sun was out and it was not near as hot as it had been the week before. There was not anything happening that was out of the ordinary. It was simply a moment in their day. Nothing is really planned, they just decided, let's sing "Old Town Road." They held hands and sang a few lines, then they were off to do something else, which became a game of "floor is lava." If you were standing on mulch then you had to get up because it became lava and could burn you. **Obviously, I was asked to stand because they wanted me to be safe.**	RS, group play Positive associations SA SA
older children that have been provided SEL from two classes (4 and 5) show higher levels of social awareness, relationship skills, self-management skills. Whereas, 3-year-old children demonstrate less developed social-emotional skills? Trend? Is more developmental	Age related development
Staff suggest children love to be outdoors and per normal schedules, there is no set time to be outdoors. They will stay out as long as they can on good weather days.	Children love outdoor play
Boy that destroys girls house (young 3-year old that just started).	Destructive, new, SA
difficulty recognizing emotion on playground when blamed for hitting another child	Self-awareness,
they ask me all day, every day, when are we going outside again?" Can we play outside?	Playground, play, their place
4-5 children have figured out that they can work together filling up a bucket and carrying it up the fixed equipment to the slide. Strategically, they pour a little out at a time for each kid to go down the slide with water.	RS, group play, Cooperative play, learning, solving problems, creating
other kids join in there becomes a confrontation over who's turn it is. In this situation, I **noticed that a teacher never intervened** (possibly because they were allowing them to work it out or they were engaged with other situations on the playground. The boys	Problem solving, RS, SA

holding the bucket decide to make the rules. He tells each when it is turn.	
There is a boy there that is frustrated. Teacher states he has no friends here today" She says **that she took him away to help calm him down. Holds hands, gives hugs**	Self-management, self-awareness

APPENDIX E

EXAMPLE IN VIVO CODED INTERVIEW TRANSCRIPTS

Speaker (interviewee)	Codes highlighted
Interviewer:	So, I noticed that you and your interns all address. everyone as friends. I was just curious. Where did this come from?
Director:	Um, my philosophy of education is very much based on constructivist theory. So it's Piaget and Vygotsky and Malaguzzi, Montessori that's you're my people. Um, and so part of that work is realizing that children are very curious and they are very intelligent and they're very much worthy of our respect. And so in terms of that, um, address them and we address them in a way that lets them know that we respect them. And so, um, in the same way that I would have a conversation with an adult, um, I had similar conversations with children, um, because they are, they're capable of doing that. If we, um, if we structure the interactions that we have with them in a way that they know that it's not, it's not fake, they can pick up on that fakeness.
	Children are intelligent, worthy of respect, not fake
Director:	So whenever I say, whenever I say I say friends, it's time for us to line up or, um, friends come ever. I want to talk with you or did you ask your friends is helping them see that, um, that we work together as a, as a, as a group of individuals and that we don't always have to agree, but that we do care about each other and that's one of the components of the being afraid. And so it goes along with a lot of that work that, um, that Montessori does in terms of her work with, um, grace and courtesy and how we treat others and how we treat ourselves. Um, and say just been part of my background, part of my training and um, and I was surprised at how quickly the other girls picked up on, on that language just because of hearing, hearing me use it, um, that they started using it too.

Friends, work together, grace, courtesy, treating each other and selves.

Children know when you are sincere, you care, kindness, empathy

Interviewer: What are the key learning skills you think you think children you believe children should develop in preschool?

But it's affective children know whenever you're sincere and they can pick up whenever you're saying it just to be saying it and then when, when you really mean that, that you would care about them and um, and their interactions with other people. Kindness and empathy are the two most important things because we talk a lot about kindness. We, um, model kindness. I ask questions about was that kind and how do we know that kind? What does that look like when it's kind in the classroom? I name things that are kind of, it was of when you helped her pick up the toys off of the, of the floor. It was kind of when you got Sarah tissue, because she was crying.

Kind, communication

It was kind of when you gave Emily a hug because she was sad. We named those behaviors. If we just say, Oh, that was Karen, that was kind of, or [inaudible] or that was not caring. Those are just words. So it's the action, it's the behavior that goes with the word. And then once children can internalize that and you hear them said these kinds of things, each other, she's not being kind to me. Right. So what does that mean? That she's not being kind to you? She won't let me play. You're right. That's not kind when someone won't let you play. So then I can help them. So did you ask her to let you play? Oh no. Well, she may not know that you want her to play. I'll go with you. And so I walked over with the child and say, Sarah, Joey wants to say something to you.

Interviewer: Okay. Um, okay, so I noticed that you have social emotional learning embedded in your curriculum.

And he would say, can I play with you? Sure. Or she may say, I want some time by myself. I just don't want to play right now. And that's okay too. So we have conversations about how honor that. But getting to them to express their emotions is important to, um, to help them into regulate their emotions. Oftentimes children, um, have acting at what many people call acting out behavior when it's really, it's a way for them to express emotions. They don't have the words or the language or the, the, um, the resources to, to manage that unless we help them to learn how to do that. And we do that through modeling, through conversations, through, um, through, and when I say role-playing, it's not so much just as an isolated incident, but it's whenever I go with the child and say, I'll go with you, but then I want you to do it.

Honor each other, expressing emotions, modeling, conversations, role-playing

Interviewer: 3) Do you believe teachers should reinforce social-emotional learning in the curriculum? Why?

4) How much importance do you place on reinforcing SEL during outdoor play? Can you provide an example?

Teacher Jamie: SEL importance, strategies for teaching, child behavior SEL first otherwise they cannot move forward in other ways.

So I come from, from the school system where I first I taught kindergarten, then I went down a year to the child development phase and I saw it when it hurt my heart so much that the social emotional piece was just gone. And children in the public school, yes. I mean there's no, they didn't foster that. There was no time for that. I didn't have always time for circle time to sit and listen to other people and their opinions. Um, you know, something happened and the child got upset over something. Well, there wasn't time to say, well, let's figure it out. You just said get over it and go like, and that's not the way they're little people. They don't have the skills to work through those problems and they have to be taught that. And it's

just huge because you think a three year old can't learn social, emotional stuff, but they can, if you teach it to them and you reiterate it and you go through those things on a day to day basis, um, they don't have the sense to foster through self-regulation, um, you know, working through emotions.

Powerful, they know how to work with others when entering structured environment, developed SECs

But if they didn't learn it, they can. And it's so powerful to watch because, um, they'll learn without, you know, if they hurt somebody accidentally, I'm sorry. And they'll come pick them up. Um, you know, somebody take something from them, they'll learn to use their words versus screaming and pitching a fit. Like that's when you do it as in these years of three, four and into five. Because then when they go into a more structured area, more structured environment, they know how to work well with others. They know how to work through those emotions. And sometimes I think we expect a little people to be these perfect soul beings, but they're, I mean, they're like us as adults. We have the way you used to regulate through that they have to be taught and now is the time. And if you don't who buddy you set yourself up for just his whole hard.

Jamie: They have to have it. All children are different.

It's so hard. Um, but yeah, like social emotional. I used to, when I worked for the university of South Carolina, I did a training on that for people. I'm like, you can't forget that. Like **they have to have it**. So you did, you did training for teachers. Yes. Yes. And just the importance. Yes. Cause you can't, you have to do it because this um, uh, our preschool teachers or seven goes to them. It was geared yet it was geared for preschoolers and I didn't, you know, off of their milestones, you know, developmental, all children are different. You can't fit them all into bubbles. But yeah, I would tell them, you have to incorporate it. Like it's the, it's your job, it's up to you and you can't get upset. Like when they don't know, because again, you relate it to you

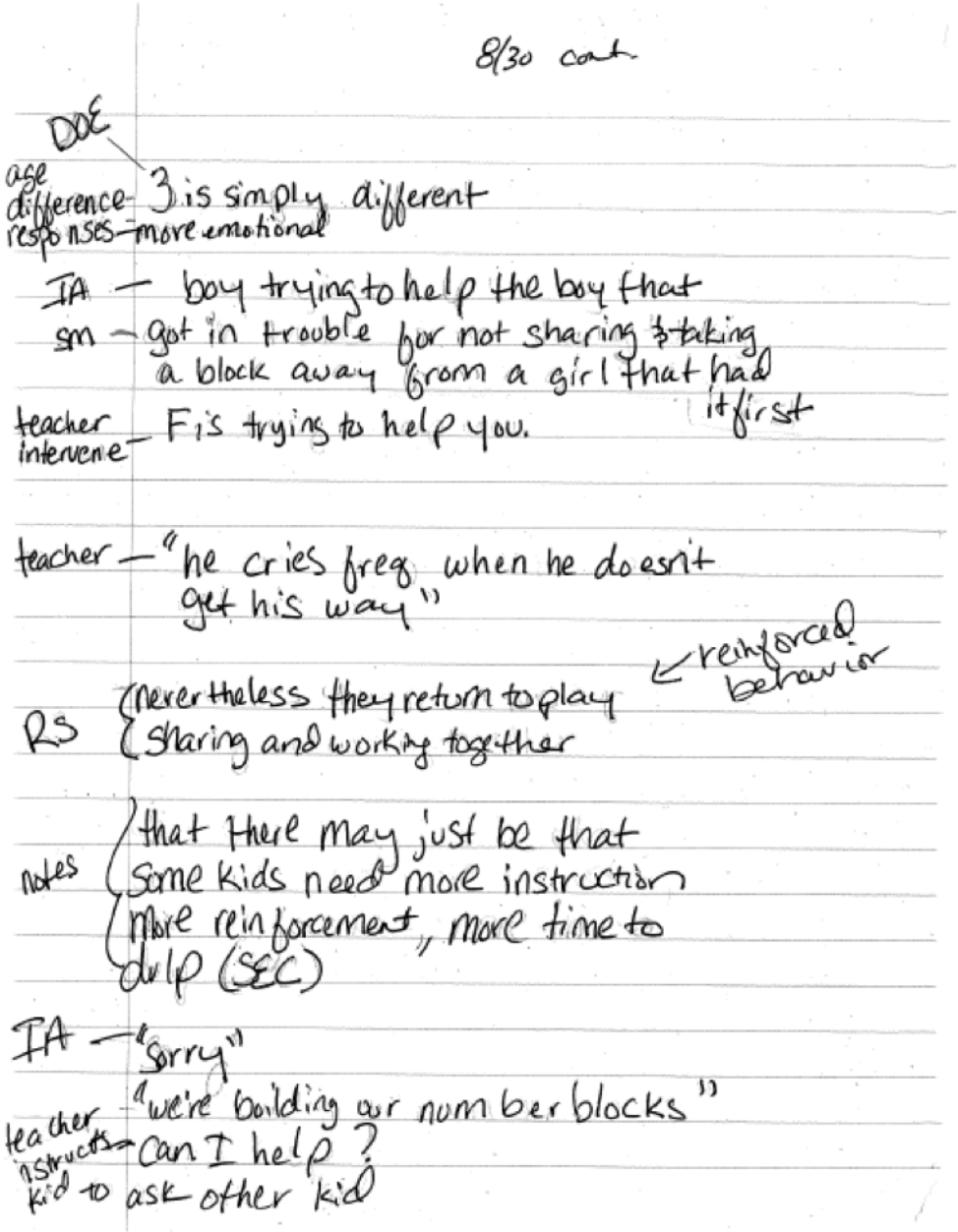
maybe as an adult, you understand that they don't like, and that that relates, I feel like also certain philosophers and their theories as well, you know, which I wouldn't incorporate too much of that cause you don't want to overwhelm people or kind of go over their heads.

Jamie: foster children's imagination through play

But there's things you learn about that as well, you know, in education that relate to children and how they, how they learn and develop. Yeah. And you're, you have, you got scaping yes. Yup. [inaudible] my favorite. Yup. Um, when I was, I took an a curriculum course. Yeah. It's on the first timers where you have imagination, you know, I mean, he's huge on that where you foster children's imagination through play and sure. It's outside that's inside. Um, I'll never forget in the school system, one of my sweet little friends, they were in the, you know, home living area and they're playing together and the little boy says local. It's okay. Just use your imagination. And she just looked at him because she didn't know. And that's the same thing. You can't, they're not born with that. You teach them that. Right. You help them learn and foster that

APPENDIX F

EXAMPLE RESEARCHER JOURNAL WITH CODING



8/30 cont.

DOE

age difference responses – more emotional

3 is simply different

IA – boy trying to help the boy that

sm – got in trouble for not sharing & taking a block away from a girl that had it first

teacher intervene – F is trying to help you.

teacher – "he cries freq when he doesn't get his way"

RS – (Nevertheless they return to play (Sharing and working together ← reinforced behavior

notes – that there may just be that some kids need more instruction more reinforcement, more time to dvlp (SEC)

IA – "sorry"

teacher instructs kid to ask other kid – "we're building our number blocks" Can I help?

APPENDIX G

DATA DISPLAY FOR CODING AND CATEGORIZATION

SEL Competencies Code (# of times coded)

Relationship skills	*Social Awareness*	*Self-Awareness*	*Self-Management*
	Awareness (9)		RDM (8)
Behavior (28)			
Conflict (17)			
			Control (17)
Conversation (13)			
		Emotion, emotional (69)	
		Feelings (24)	
	Empathy (16)		
		Expressing, expressions (22)	
Friends (39)			
Group/s (36)			
		Interpersonal-12, internalize-2, interpret 6 (18)	
	Kind (26)		
Skills (25)			
Relationship Skills (64)			
Social, social-emotional, socialize, socialization, socially (56)			
	Social awareness (62)		
			Self-management (40)
		Self-awareness (32)	

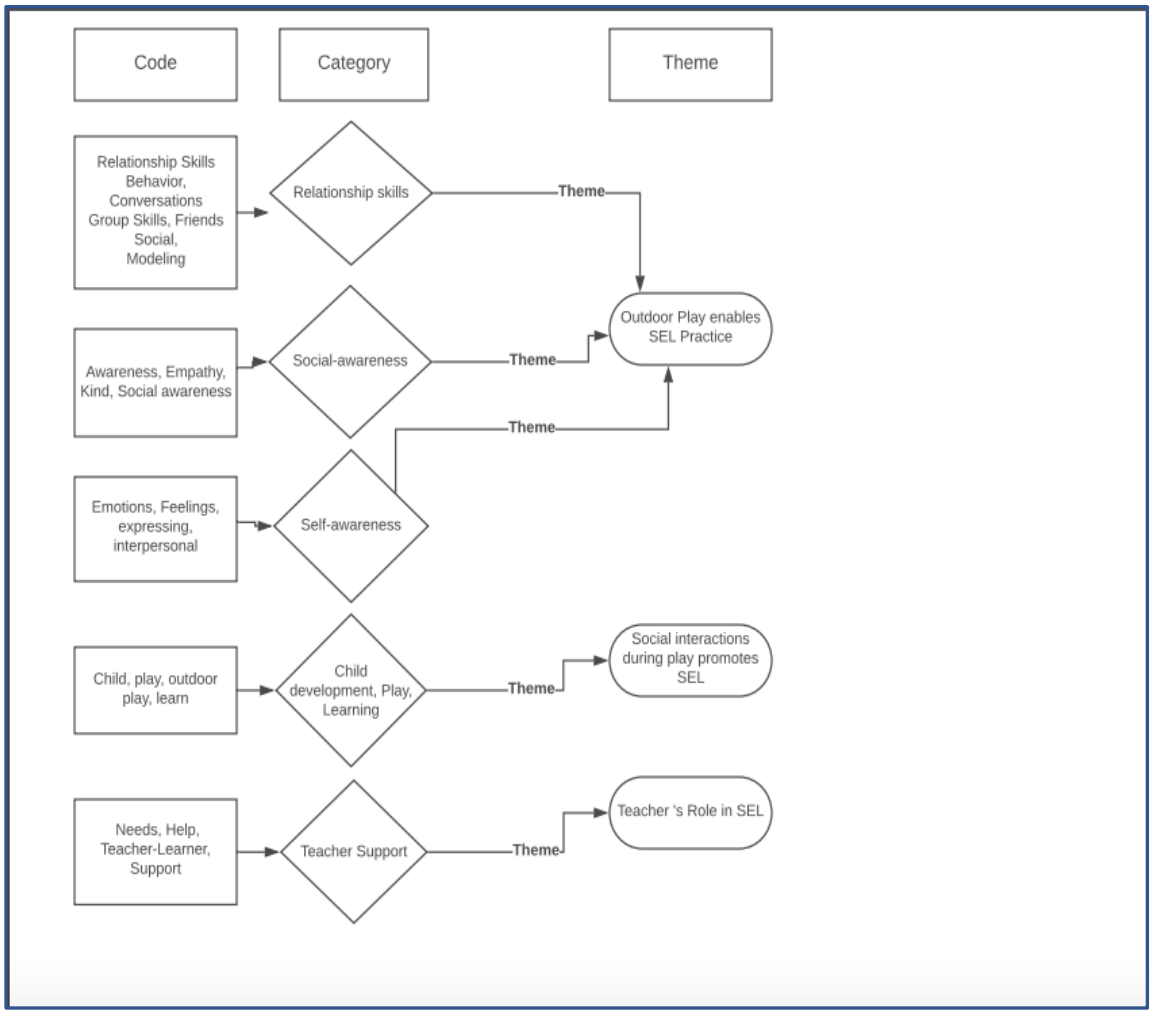
Additional Categories

Teacher Support	*Child-development-Play-Learning*
Needs, needed (45)	Childhood/Children/Child (73)
Help (25)	Play, playground, playing, plays (135)
Support (18)	Outdoor play (14)
Teacher (53) teach, taught (67)	Learn, learning, learned, learner (59)

This table is a display of data condensation. The words were chunked under the categories based on similarities in the data. Codes were shifted with the tab key to the category of best fit. *Additional categories were developed here and labeled as such.

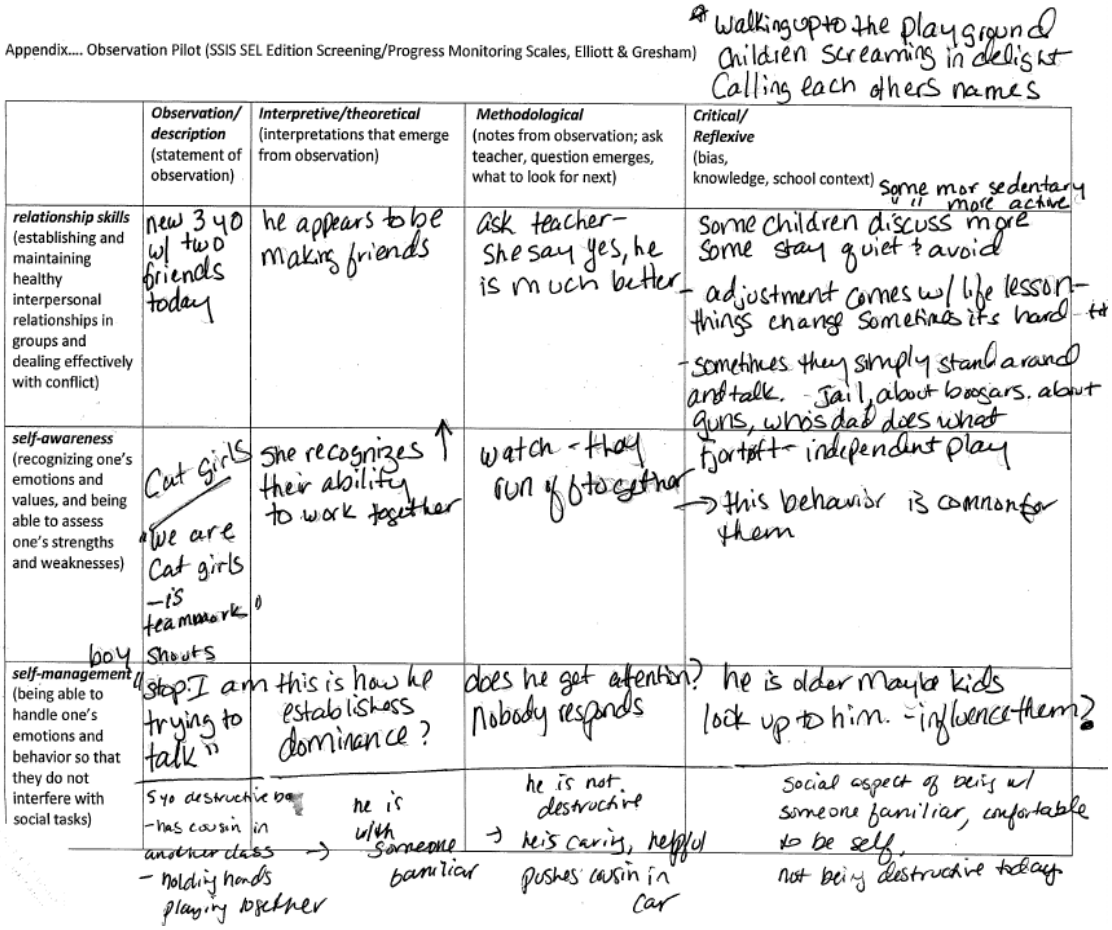
APPENDIX H

DATA DISPLAY OF THEMATIC ANALYSIS



APPENDIX I

EXAMPLE HAND-WRITTEN FIELD NOTES



Appendix.... Observation Pilot (SSIS SEL Edition Screening/Progress Monitoring Scales, Elliott & Gresham)

* Walking up to the playground children screaming in delight calling each others names

	Observation/ description (statement of observation)	*Interpretive/theoretical* (interpretations that emerge from observation)	*Methodological* (notes from observation; ask teacher, question emerges, what to look for next)	*Critical/ Reflexive* (bias, knowledge, school context)
relationship skills (establishing and maintaining healthy interpersonal relationships in groups and dealing effectively with conflict)	new 3 yo w/ two friends today	he appears to be making friends	ask teacher- She say yes, he is much better	some children discuss more / some more sedentary / more active some stay quiet & avoid - adjustment comes w/ life lesson- things change sometimes it's hard - sometimes they simply stand around and talk. - Jail, about boogars. about guns, whos dad does what fort/da - independent play → this behavior is common for them
self-awareness (recognizing one's emotions and values, and being able to assess one's strengths and weaknesses)	Cat girls "we are Cat girls - is teamwork" boy shouts "stop! I am trying to talk"	she recognizes ↑ their ability to work together	watch - they run off together	
self-management (being able to handle one's emotions and behavior so that they do not interfere with social tasks)	this is how he establishes dominance?	does he get attention? Nobody responds	he is older maybe kids look up to him. - influence them?	
	5yo destructive be - has cousin in another class - holding hands playing together →	he is w/ someone familiar	he is not destructive → he is caring, helpful pushes cousin in car	social aspect of being w/ someone familiar, comfortable to be self, not being destructive today

G- new 540

social awareness (demonstrating understanding and empathy for the feelings of others)	"hey Ms. D can you sit w/ me"	Still need to be nurtured	does he do this freq. "yeah when he gets tired - sometimes in the morning"	based on knowing his past, he may be lacking this attention at home.
responsible decision making (making ethical and constructive choices about one's personal and interpersonal behaviors)	"that's a real total lie"	in response to "it was an accident"	teachers just blow this off	they are allowing children to solve probs on their own

- Resolving conflict
- Self-management in face of frustration
- Collaboration
- Distractions

Self-regulation- inhibitory control, attentional control, working memory (Boncoddo 2010)- found in Becker 2014. Focused attention, locomotor play, active and MVPA. Complete activities, inhibit prepotent actions. (requires sophisticated cognitive processing)

Self-awareness (Vazou)- facial expressions- negative: looks bored, unhappy, angry; neutral: does not express any affective tone; positive affect: looks interested

1) Sometimes children literally get over issues very quickly - forget?

2) Constant interruptions - the science ladies
- music time change
- shift schedule for visiting educational individual - "music lady"

3) full time teacher
stands around groups of children - more involved

4) "pic play" - common verbal command from teachers