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## Playful Aggression and the Situational Contexts That Affect Perceptions

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PLAYFUL AGGRESSION AND THE SITUATIONAL  
CONTEXTS THAT AFFECT PERCEPTIONS

by

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A dissertation submitted in partial fulfillment  
of the requirements for the

Doctor of Philosophy - Early Childhood Education

Department of Educational and Clinical Studies  
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May 2015

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## ABSTRACT

### **Playful Aggression and the Situational Contexts That Affect Perceptions**

by

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Play is considered a fundamental tool for early childhood education practices as it provides numerous developmental benefits for young children. However, not all play is viewed by children, parents, and early childhood educators the same, especially playful aggression. For example, rough-and-tumble play, risky play, superhero play, “bad guy” play, active pretend play, play fighting, big body play, war play, gun play, and physically active and imaginative play are types of playful aggression that benefits young children’s development; but are often viewed negatively by the adults who observe it. The contextual factors that influence the development of these conflicting perceptions—the motivation for the current study—have received little attention from the research community.

It is unclear how the context of playful aggression—and contextual factors associated with observing playful aggression—affect adults’ perceptions of this form of play behavior. Therefore, this study aims to clarify which contextual components associated with observed playful aggression influence perceptions of the behavior and to what degree. Results of the current study demonstrates a hierarchy of perceived playful aggression of 3- to 5-year-olds—based on the degree of perceived “playfulness”

demonstrated in their actions—that is defined by the unique combination of factors that are believed to influence perception.

Using video vignettes imbedded in an online survey questionnaire, combined with conjunctive analysis of case configurations as the primary analytic approach, the current research answers the following research questions:

1. Are perceptions of playful aggression “situationally invariant” or do attitudes about playful aggression vary by specific combinations of contextual factors such as a child’s age, whether an adult is present supervising the play, and the presence/type of weapon children play with, which define the situational context of aggressive play?
2. Do the contextual factors (i.e., children’s age, supervision, weapon presence/type) that are believed to affect perceptions of aggressive play demonstrate “main effects” on perceptions or does the influence that factors have on perceptions vary across situational profiles?
3. Do situational profiles that define the context of playful aggression that is most likely to be viewed as “playful” differ significantly for parents versus non-parents and for teachers versus administrators?

A convenience sample of adults employed in 12 early childhood educational centers located in Clark County, Nevada, was recruited to participate ( $n=41$ ). Participants were asked to view a total of 12 videos, each lasting 15 seconds. Within each video, three variables related to the context of the play behavior were manipulated: a) whether the age of the children at play in the scene were the same, b) whether the play was supervised, c)

and whether/type a toy weapon was used during play. When these contextual factors were combined, they created a total of 36 unique videos ( $2 \times 3 \times 6=36$ ).

Each respondent was asked to view a random series of 12 videos. After each video the dependent variable—perception—was measured. Specifically, a respondent was asked to rate the behavior observed in each video. Scores were recorded on a seven-point semantic differential scale that ranged from (0) “play” to (7) “violent”. Given the affects of certain demographic characteristics that influence perceptions of playful aggression, participants also provided demographic information about their gender, race/ethnicity, education status, parental status, and whether they were currently a teacher or part of their school’s administrative staff.

This study, believed to be the first of its kind, adds to the existing body of knowledge by advancing our understanding of the situational context of playful aggression. It is important for two specific reasons. First, it helps clarify why different people view aggressive play differently, by identifying specific combinations of contextual factors that influence perceptions of aggressive play behavior. Second, results from the current study provide insight into policy geared towards integrating the positive benefits of playful aggression on child development into the classroom, by defining the situational context of aggressive play that is viewed as most “playful.” Finally, future research should build on information produced from the current study to develop effective approaches to include playful aggression experiences in educational policy and practice.

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## CHAPTER 1

### INTRODUCTION

According to recent figures from the U.S. Department of Education's National Center for Education Statistics (NCES, 2011), the number of children age 3 to 5 enrolled in preprimary programs grew from 27% of the population in 1965 to nearly 64% of the population in 2009. There are several possible explanations for the dramatic increase in the number of young children enrolled in school today. First, due to an increase in the number of households where both parents are employed outside of the home (U.S. Bureau of Labor Statistics, 2011), more children require childcare. Second, parents, particularly well-educated mothers, may place more value on education and have a better appreciation of the value of early childhood education and an increased willingness to invest in their child's development (Greenberg, 2011). Finally, local, state, or federal officials may realize the short- and long-term financial benefits of high-quality preschool programs and subsequently increase the funding allocated for early childhood education (Greenberg, 2010). Although the NCES data do not provide an explanation for why a growing number of children are enrolled in school, it is clear that more children today are exposed to a structured educational setting than ever before.

As decades of research demonstrate play as the means through which young children learn (Parten, 1932; Piaget, 1951; Smilansky, 1990; Vygotsky, 1966) early childhood environments foster young children's skill development through daily playful experiences. In support of play as a key component of early childhood pedagogy, the National Association for the Education of Young Children (NAEYC), the world's largest organization dedicated to improving the education of young children, provides a

framework of principles and guidelines for best practices in early childhood care and education. Collectively, these guidelines are known as Developmentally Appropriate Practice (DAP). DAP promotes young children's optimal learning and development through play-based pedagogy (NAEYC, 2010). Since about 60% of American children under age five spend the majority of their day in childcare, many early childhood education policymakers at the state level have adopted principles and guidelines for play-based curricula and play-based best practice (American Educational Research Association, 2005). As such, early childhood curriculums aim to provide young children's optimal growth and development through play-based pedagogy (Hewes & McEwan, 2006; NAEYC, 2010).

### Early Childhood Curricula in the U.S.

*HighScope*, *Reggio Emilia*, *HighReach Learning*, and *Creative Curriculum* are among some of the most popular early childhood education curricula in the U.S. and position play at the forefront of children's learning experiences. For example, the *HighScope* curriculum emphasizes children's learning through active experiences with people, materials, events and ideas. Block play, art activities, house play, small toys, and writing are all used in this approach in order to foster independence (Laevers, May, Rinaldi, & Weikart, 2004). Another popular play-based curriculum, the *Reggio Emilia* approach, allows children to construct and synthesize experiences by building and testing theories as an active learner with peer and teacher support, within an environment that includes dramatic play, art, science, and language (Laevers et al., 2004). Alternatively, *The Creative Curriculum* philosophy has five fundamental beliefs, each supported by



theoretical and empirical research—including constructive and purposeful play for meaningful learning at each child’s own level (*The Creative Curriculum*, 2011). The *HighReach Learning* curriculum, based on research and theory in early childhood, incorporates Bergen’s Arousal-Seeking Theory of Play, which explains children’s tendency to create interesting and exciting environments through play. Although different in approach, each of the learning strategies just described has one common element: play is emphasized as a key role of the learning process, a process that actively engages children with environmental materials, activities, and people in a way that optimizes their learning experience.

### Play, Learning, and Childhood Development

Play is considered a fundamental tool for early childhood education practices providing numerous developmental benefits for young children and is easily imbedded into curricula. Through playful experiences young children further their creative expression, language and literacy, cognitive competence, social skills, and physical development. Current research views play not as an unimportant pastime, but as a critical component of early childhood programs because of its positive impact upon social, physical, cognitive and emotional development (Calabrese, 2003). In short, play is the foundation of young children’s growth and development (Malloy & McMurray-Schwarz, 2004).

During play, children advance their physical, cognitive, communicative, and social-emotional development (Hewes & McEwan, 2006). For example, children benefit physically through their exploration of social boundaries, placement in a social group,

and repetitive movements to test their strength and restraint (Calabrese, 2003). Play also fosters children's physical health through exercising their fine and gross motor muscles, as well as providing children with an outlet to release built up energy. Physical benefits are intermingled with cognitive benefits such as children learning about the effect their behavior has on others (Logue & Harvey, 2010) and being provided creative outlets to explore their world with a sense of empowerment (Parsons & Howe, 2006).

Children engaged in play foster intellectual benefits through cause-and-effect relationships and their exploration of complex or challenging concepts that require higher level thinking (i.e., logico-mathematical thinking and scientific thinking), thus further developing their cognitive competence. Social play also requires children to cooperatively develop themes, make decisions, pay attention to detail, sequence their actions, and resolve conflicts or solve problems (Bauer & Dettore, 1997). Furthermore, dramatic play, which fosters cognitive and social development in young children is a facilitator of symbolic functioning (Hewes & McEwan, 2006), and is valuable for mathematics (Emfinger, 2009) and literacy (Korat, Bahar, & Snapir, 2003; Pellegrini & Galda, 1993) development. Young children's symbolic play fosters literacy aspects related to early reading and writing (Pellegrini & Galda, 1993). For example, during sociodramatic interactions young children continually negotiate with peers and adults, who provide contexts of literacy experiences (Korat et al., 2003).

The social benefits of play for young children extend from developing friendships and participating cooperatively to maintaining those friendships by developing trusting relations (Hewes & McEwan, 2006; Pellegrini, 1988; Reed & Brown, 2000; Reed, Brown & Roth, 2000). Through social pretend play young children learn to build strong peer

relationships (Dunn & Hughes, 2001). Play provides children with the opportunities to develop concepts of right and wrong, and good and bad (Bauer & Dettore, 1997) in support of social-emotional development. Through their playful interactions with peers and adults children learn, practice, and maintain challenging vocabulary and more advanced language concepts while simultaneously learning to view the perspectives of others.

### Perceptions of Aggressive Play Behavior

Although the literature is filled with scientifically based evidence demonstrating the value of play, not all play is viewed by children, parents, and early childhood educators the same, specifically, playful aggression. For example, rough-and-tumble play (Jarvis, 2007; Pellegrini, 1987; Smith & Lewis, 1984; Tannock, 2008), risky play (Sandseter, 2009), superhero play (Bauer & Dettore, 1997), “bad guy” play (Logue & Detour, 2011), active pretend play (Logue & Harvey, 2010), play fighting (Hart & Tannock, 2013b; Pellis & Pellis, 2007), big body play (Carlson, 2011b), war play (Levin & Carlsson-Paige, 2006; Hellendoorn & Harinck, 1997), gun play (Watson & Peng, 1992) and physically active and imaginative play (Parsons & Howe, 2006) are types of playful aggression that benefits young children’s development; but are viewed negatively by the adults who observe it. The contextual factors that influence the development of these conflicting perceptions have received little attention from the research community.

The most common type of aggressive play, rough-and-tumble (R&T), continues to receive the majority of attention by early childhood scholars. As such, a greater understanding of the contextual components is being realized. In response, teacher

support strategies and guidelines are being developed to encourage the inclusion of R&T play within early childhood settings (Carlson, 2011b; Fletcher, May, St George, Morgan & Lubans, 2011; Freeman & Brown, 2004; Hart & Tannock, 2013b; Reed et al., 2000). However, because R&T play behavior parallel other types of playful aggression such as superhero play and play fighting, it is important to develop a clear understanding of each play type—characteristics, benefits, and perceptions—and categorize these various behavior types under one broad term: playful aggression (Hart & Tannock, 2013b) rather than attempting to categorize these interrelated behaviors as distinctly different from one another. Only then will early childhood professionals have the ability to accurately distinguish the differences between young children’s playful aggression and serious aggression, and support its inclusion in early childhood educational settings.

### Statement of Purpose

Although current research supports the many benefits of play, including R&T, gaps in the literature remain. Because R&T has not been widely researched and the majority of academic literature focuses on elementary school-age boys there is little information available on playful aggressive behavior within early childhood settings. There is a need, for example, for additional research that enhances our understanding of how perceptions of playful aggression are formed, particularly in the field of early childhood education. It is unclear how the context of playful aggression—and contextual factors associated with observing playful aggression affect adults’ perceptions of this form of play behavior. In response to this particular gap in the existing literature, this study clarifies which contextual components associated with observed playful aggression

influences perceptions of the behavior and to what degree. Results of the current study have been used to develop a hierarchy of perceived playful aggression of 3- to 5-year-olds—based on the degree of perceived “playfulness” demonstrated in their actions—that is defined by the unique combination of factors that are believed to influence perception.

### Research Questions

Specifically, the following questions are answered by the current research:

1. Are perceptions of playful aggression “situationally invariant” or do attitudes about playful aggression vary by specific combinations of contextual factors such as a child’s age, whether an adult is present supervising the play, and the presence/type of weapon children play with, which define the situational context of aggressive play?
2. Do the contextual factors (i.e., children’s age, supervision, weapon presence/type) that are believed to affect perceptions of aggressive play demonstrate “main effects” on perceptions or does the influence that factors have on perceptions vary across situational profiles?
3. Do situational profiles that define the context of playful aggression that is most likely to be viewed as “playful” differ significantly for parents (versus non-parents) and for teachers (versus administrators)?

Common characteristics and components of playful aggression are presented from a thorough review of current professional literature. The review provides insight into the development of a cohesive definition of playful aggression. In addition, parallels among the various aggressive play types are identified within the literature in order to develop an appropriate conceptualization of playful aggression. Additionally, scholarship on

parents', teachers', and early childhood professionals' perceptions of risky behavior in general and playful aggression in particular are offered in order to provide a more detailed understanding of the components of play that are viewed as "acceptable and playful" versus behavior perceived as "unacceptable and violent".

### Significance

Hart and Tannock (2013a) suggest societal influences increase young children's interest in playful aggression including movies (e.g., Star Wars), books (e.g., Harry Potter), national figures (e.g., military forces), community helpers (e.g., police officers), professional sports (e.g., rugby) and commercial toys (e.g., Nerf<sup>®</sup> guns). Pervasive in Western culture, R&T play has been ritualized in major spectator events such as hockey, football, basketball, and stock car racing (Reed & Brown, 2000). However, because playful aggression in educational settings is either discouraged or banned children receive mixed messages about the appropriateness of play fighting and war toys in school, home, and community settings (Hart & Tannock, 2013a). For example, competitive sports such as fencing, kendo, wrestling, and judo involve playful aggressive behavior because players attempt to dominate one another, not cause injury (Hart & Tannock, 2013a). In contrast, boxing and ultimate fighting—recognized as a sport—allow for a greater degree of aggression; more specifically, violent behavior such as a "knock out" is considered an appropriate context of the sport. Collectively, these examples are categorized as a type of game play. As such, they are guided by rules that specify how the sport is played and involve physically aggressive behavior as a crucial aspect of success and a normative expectation for players (Miethe & Deibert, 2007).

As in sports, playful aggression is guided by specific rules of the game, yet considered inappropriate behavior by young children. Playful aggression is a highly sophisticated activity that builds community among the players and behavior that violates its rules should be banned, not the play itself (Freeman & Brown, 2004). Playful aggression among young children involves rules and routines that vary between the context of the play such as level of friendship, setting, culture, gender, and age (Freeman & Brown, 2004; Hart & Tannock, 2013b; Malloy & McMurray-Schwarz, 2004; Reed et al., 2000; Pellegrini, 1989a, 1989b; 1994). Because violence within sports is dependent on the rules and routines of the specific event (Miethe & Deibert, 2007) young children's exposure to varying levels of adults' aggressive behavior is cause for confusion as to why such behavior is socially acceptable in particular settings (e.g., sports), but not in their play. The current research has the potential to significantly impact both professionals and academics alike, including educational leadership, primary educational pedagogy, and early childhood educational policy.

#### Implications for Education Leadership

The Australian and United Kingdom governmental departments of education provide some guidelines that give the responsibility of setting play fighting rules to individual educators. Therefore, support for playful aggressive behavior is dependent on the formal training and personal values of teachers. As teacher education programs tend to discourage all forms of aggression (Freeman & Brown, 2004; Reed et al., 2000) the inclusion of playful aggression in educational settings is unlikely to occur. Additionally, because statewide policies, national frameworks, and early childhood curricula either do not identify or explicitly ban playful aggression early childhood educators and parents are

receiving the message that playful aggressive behavior is inappropriate in home and school settings and among age groups. Teachers often discourage play fighting and young children who engage in aggressive play will likely experience consequences that range from redirection to school expulsion (CCSD, 2009).

### Primary Education Influences

With a focus on skills and knowledge required for students' success in higher education and professional careers, educational policy targets what has been labeled the core knowledge areas including language arts, mathematics, and science. Student outcomes are driven by quantitative measures with little regard to the developmental benefits of child-initiated peer interaction. Although the aim of the national standardization of curricula and assessment is to provide equal educational opportunities for all students, the learning expectations outlined in the standardized core knowledge frameworks typically guide policy and practice (Elkind, 1990; Stipek, 2006) rather than foster and support the creative vision of principals, the innovative teaching techniques by classroom teachers, the emergent interests of students, and the culture of the local community. For example, the mission of the National Common Core Standards in the U.S. is to provide teachers and parents a clear and consistent understanding of student learning expectations in mathematics and English language arts (National Governors Association Center for Best Practices, 2010). Additionally, the Australian Curriculum is currently drafting and implementing English, science, mathematics, and history learning goals (ACARA, n.d.). Although national frameworks are directed toward school-age children, primary policy greatly influences the policy and practice of children birth through five (Bodrova, 2008; Elkind, 1990; Stipek, 2006). Educators are continually



pressured to teach academic skills at a progressively younger age at the expense of traditional early childhood learning activities such as play (Bodrova, 2008; Elkind, 1990). Advocates for core knowledge learning areas may be causing more harm than good by reducing opportunities for the development of critical, analytic, and creative thinking; reasoning skills, social competence, behavioral self-regulation; and physical and emotional well-being (Stipek, 2006).

School policy makers and classroom teachers typically prohibit playful aggression in educational settings because of perceptions that it leads to violence (Flanders et al., 2010; Pellegrini, 2003) is unsafe (Bauer & Dettore, 1997; CCSD, 2009; Freeman & Brown, 2004; Logue & Harvey, 2010), that such risky behavior may cause injury (CCSD, 2009; Little, Wyver, & Gibson, 2011; Sandseter, 2007, 2009), and that the behavior is seriously aggressive or violent (CCSD, 2009; Dunn & Hughes, 2001; Logue & Harvey, 2010; Ohio School Report Cards, 2012-2013; Parsons & Howe, 2006). For example, Nevada's Las Vegas Clark County School District (CCSD) in the U.S. has a zero tolerance policy on any intentional behavior that could cause physical injury, and the use of any object or behavior that represents a simulated weapon (CCSD, 2009). Any violation of this policy by a student could ultimately result in their expulsion. Furthermore, a teacher's allowance of playful aggression could result in their dismissal of employment. More specifically, the adoption of a zero tolerance policy by the state of Ohio has resulted in a total of 419 student suspensions and 38 expulsions because of behavior falling under the category of "firearm look-a-likes" (Ohio School Report Cards, 2012-2013); the most recent suspension given to Nathan Entingh, a 10-year-old boy attending public school in Ohio's Columbus City School District, for shaping his fingers

into the form of a gun and saying, “Boom” (Cuevas, 2014). Such zero tolerance policies have trickled down into early childhood settings creating controversy. One such controversy occurred in America with three-year-old Hunter Spanjer of Nebraska. Hunter, born deaf, communicates using American Sign Language. His parents claimed that a week after his enrollment into a public preschool for children with deafness school officials requested the sign for his name be changed because it resembled the actions of firing a gun (Gold, 2012). Zero tolerance policies categorizing playful aggression as an unacceptable play type or as a form of violence lend support to the argument that it is an unacceptable behavior in early childhood settings and disregard current literature that indicates otherwise.

In Australia, Queensland’s department of education *Code of School Behaviour: Better Behaviour Better Learning* (Queensland Government Department of Education, Training and Employment, 2007) does not specifically identify playful aggression as inappropriate; however, heads of school have interpreted the document to exclude playful aggression in schools. For example, Queensland Independent College—a private primary school—prohibits play fighting under the guise of practicing safety and self-control (Williams, 2012). Similarly, Caboolture State School, primary through year 12, bans play fighting because it is not courteous behavior (Caboolture State School Handbook, 2010). Attempting to clarify expectations and balance learning expectations across schools, the Australia Curriculum fosters inconsistent regulations of various play types, specifically, playful aggression.

Similarly, the United Kingdom Department for Education also provides general behavior principles for guiding school and classroom policy. Using the department’s

framework the responsibility for developing school rules, disciplinary penalties for inappropriate behavior, and rewards for desired behavior remains with classroom teachers (United Kingdom Department of Education, 2012). Again, playful aggression policy is susceptible to individual educators' opinions, values, and professional development due to broad behavioral expectations and guidelines that fail to identify playful aggression as distinctly different from serious aggression and appropriate behavior in educational settings.

As expressed by national curriculum frameworks and standards for Kindergarten through year 12 in the U.S., U.K., and Australia the benefits of playful aggression are not recognized as important for students' future success in higher education and careers. Classroom teachers are continually pressured to disregard the benefits of aggressive sociodramatic play by banning its various forms—particularly play fighting (Carlson, 2011a; Logue & Harvey, 2010) and war toys. The elimination of play fighting and war toys by parents and educators may have a significant impact on young children's development.

#### Early Childhood Educational Policy Reform

The introduction for a needed change in early childhood educational policy addressing the positive developmental influence of playful aggression has the potential to improve young children's social and academic performance long-term (Fletcher et al., 2011; Freeman & Brown, 2004; Hewes & McEwan, 2006; Pellegrini, 1994; Reed et al., 2000). However, because playful aggression involves physical actions and verbalizations that mimic serious aggressive behavior it is often categorized as violence and as a result it is prohibited (Freeman & Brown, 2004; Fry, 1987; Hellendoorn & Harinck, 1997; Jarvis,

2007; Logue & Detour, 2011; Malloy & McMurray-Schwarz, 2004; Parsons & Howe, 2006; Pellegrini, 1987; Pellis & Pellis, 2007; Scott & Panksepp, 2003). For example, participants commonly engage in playful verbal aggression such as yelling, threatening, and wailing, while their physical play encompasses play hitting, kicking, pushing, pulling, punching, and chase-and-flee (Bauer & Dettore, 1997; Fry, 1987; Hellendoorn & Harinck, 1997; Jarvis, 2007; Logue & Detour, 2011; Logue & Harvey, 2010; Parsons & Howe, 2006; Pellegrini, 1994; Pellis & Pellis, 2007; Scott & Panksepp, 2003; Smith & Lewis, 1984; Tannock, 2008). Playful aggression is also often considered to be serious aggression because there is a lack of understanding of its playful nature, combined with the misconception that all aggressive behavior is serious and is intended to harm (Fletcher et al., 2011; Freeman & Brown, 2004; Hewes & McEwan, 2006; Logue & Detour, 2011; Pellegrini, 1987; Reed et al., 2000). However, the elimination of playful aggression may have a significant impact on academic performance (Hart & Tannock, 2013b). Research suggests that the optimal development of young children is not being met when playful aggressive tendencies are prohibited within early childhood educational settings (DiPietro, 1981; Jarvis, 2007; Logue & Harvey, 2010; Pellegrini, 1987). Sutton-Smith (1975) suggests that the restriction of play types in any educational program will foster play deficits. The elimination of playful aggression is particularly detrimental to young boys' growth and development (DiPietro, 1981) as they engage in aggressive play more often than girls (Carlson, 2011b; DiPietro, 1981; Freeman & Brown, 2004; Hewes & McEwan, 2006; Levin & Carlsson-Paige, 2006; Reed et al., 2000; Sutton-Smith, 1988).

The debate among educational professionals continues as to the appropriateness of playful aggression within educational settings (Boyd, 1997; Freeman & Brown, 2004; Parsons & Howe, 2006). Although researchers offer support strategies for its inclusion in early childhood settings (Bauer & Dettore, 1997; Calabrese, 2003; Carlson, 2011b; Freeman & Brown, 2004; Hart & Tannock 2013b; Parsons & Howe, 2006; Pellegrini, 1987; Reed et al., 2000), strict policies prohibiting playful aggression remain (Boyd, 1997; Freeman & Brown, 2004; Reed et al., 2000). In order to better understand how aggressive play can be effectively included into the educational setting, there is a need to more fully understand how perceptions of aggressive play are formed. When they are better understood, research-based strategies for incorporating aggressive play into the education setting can be realized.

#### Research to Practice

Studying the perceptions of playful aggression would provide a venue for putting research into practice. By first understanding the situational contexts of playful aggression and how it affects perceptions, the knowledge gained from this research will allow for an efficient and effective transition toward the professional development of early childhood teachers and directors, and parental guidance for families. Findings from the current study will also offer a more informed definition of playful aggression because it will be informed by the specific situational profiles defining the context that influence perceptions of play behavior. This is important for two reasons: (a) professional development programs and the distribution of parental literature will be able to target the adults more likely to consider playful aggression as inappropriate play in early childhood

settings, and (b) professional development programs and parental literature may be tailored to suit the needs of particular audiences.

### Limitations

Despite its potential to make a significant impact on the existing early childhood education scholarship, two limitations associated with the current methodological strategy must be acknowledged. First, the current study uses a sampling technique that limits the generalizability of findings. However, the study's analytic strategy (i.e., conjunctive analysis of case configurations—see Chapter 2) is one that uses a case-oriented approach versus a variable-oriented approach. As a result a greater value is placed on being able to demonstrate the situational contexts associated with how aggressive play is perceived than on being able to generalize findings to a larger population.

Second, the current study uses video vignettes to present aggressive play behavior to potential participants (see Chapter 2). Although the situational factors believed to affect perceptions are clearly discernible (e.g., different play types, and play that is supervised/not supervised), the audio for each video will be muted. As a result, participants' perceptions of contextual components of the play behavior identified in the current study are limited to visual cues only.

### Definition of Terms

Given the complex nature of this study, relevant concepts must be clearly defined. The following is a list of key terms and how they will be defined for the purposes of this proposed study.

*Big Body Play* – boisterous, vigorous, and very physical large motor play (Carlson, 2011b).

*Conjunctive Analysis of Case Configurations* – a data analytic technique that bridges the gap between variable-oriented and case-oriented methodologies (Miethe, Hart & Regoeczi, 2008).

*Curriculum* – the framework for teaching and learning in an early childhood education program (The Creative Curriculum, 2011, October).

*Early Childhood* – children birth to 8 years of age (The Division for Early Childhood, 2011).

*Early Childhood Education* – practice and pedagogy for children birth to 8 years of age (The Division for Early Childhood, 2011).

*Fantasy Play* – play involving actions, use of objects, nonliteral language, and distinct roles (Pellegrini & Smith, 1998).

*Natural Environment* – a large, grassy area.

*Parent* – the child’s natural parent, guardian or any other person or organization legally responsible for the child (DPBH, 2012, Bd. for Child Care, Child Care Facilities Reg. § 1.18, eff. 2-28-80).

*Play* – a multi-dimensional, developmental activity expressed through a variety of forms and actions (Sutton-Smith, 1975).

*Play Fighting* – cooperative, voluntary pretend aggressive behavior lacking intent to seriously injure or harm (Hart & Tannock, 2013b; Pellis & Pellis, 2007).

*Playful Aggression* – verbally and physically cooperative play behavior involving at least two children, where all participants enjoyably and voluntarily engage in

reciprocal role-playing that includes aggressive make-believe themes, actions, and words; yet lacks intent to harm either emotionally or physically (Hart & Tannock, 2013b).

*Preschool* – a facility in which the licensee has established specific goals to enhance each child’s cognitive, social, emotional, physical and creative development (DPBH, 2012, Bd. for Child Care, Child Care Facilities Reg. § 1.20, eff. 2-28-80).

*Pretend Aggression* – play participants recognize that their actions and verbalizations to be within the play realm rather than reality (Malloy & McMurray-Schwarz, 2004).

*Risky Play* – play that involves the threat of physical injury (Sandseter, 2007, 2009, 2010).

*Rough and Tumble Play* – a reciprocal physical play involving two or more children usually encompassing a violent theme and/or violent language that may include one or a combination of the following playful characteristics: fighting, kicking, jumping, running, chasing, hitting, punching, pushing, shooting, sword fighting, killing, and yelling (Jarvis, 2007; Pellegrini, 1987; Smith & Lewis, 1984; Tannock, 2008).

*Serious Aggression* – physical behavior or violent language intending to injure or harm physically or emotionally (Anderson & Bushman, 2002; Bandura, 1978; Robertson, Daffer, & Bucks, 2011).

*Situational context* – used in conjunctive analysis, it reflects the unique combination of factors predicting an outcome simultaneously (Miethe, Hart, Recoegzi, 2008).



*Superhero Play* – the active physical play of children pretending to be media characters imbued with extraordinary abilities, including superhuman strength or the ability to transform themselves into superhuman entities (Boyd, 1997, p. 23).

*Teacher* – a lead educator of children ages 3-5 years of age.

*War Play* – a form of imaginary play that includes episodes of pretend aggression and involves acting out roles of violence, aggression, or war witnessed or experienced by children (Malloy & McMurray-Schwarz, 2004).

*Vignette* – hypothetical situation presented to respondents to obtain an opinion about behavior (Caro et al., 2012).

*Young Child* – a child 8 years or younger.

#### Summary

With a growing number of young children enrolled in preschool programs, it is important for educators to provide beneficial experiences conducive to fostering optimal development of young children in all domains of learning. After all, research suggests that children's play—all types of play—should be the foundation of early childhood practice. However, the inclusion of playful aggression continues to be a neglected aspect of early childhood curricula, due in large part to the lack of knowledge regarding its benefits, perceptions of all aggression as serious with intent to harm, and requirements to uphold zero-tolerance policies. The intolerance of preschool children's playful aggression may reduce their optimal development; more specifically, young children's cognitive, social, physical, and communicative development may be deprived of developing to the fullest extent.

It is unclear how perceptions of playful aggression are formed, due to the “contextual effects” associated within each type of aggressive play (e.g., superhero play, R&T play, and play fighting) and whether these perceptions will differ for parents and non-parents as well as for early childhood teachers and administrators (Tannock, 2008). In response, this research seeks answers to important questions related to how perceptions of aggressive play are formed, including (a) are perceptions of playful aggression “situationally invariant”; (b) do contextual factors believed to affect perceptions of aggressive play demonstrate “main effects” on perceptions; and (c) do situational profiles that define the context of playful aggression and that are most likely viewed as “playful” differ significantly for parents versus non-parents and for teachers versus administrators? Answers to these questions will inform our understanding of how playful aggression is perceived and as a result offer insight into strategies that will help facilitate the adoption of aggressive play in early childhood curricula. Before a description of the current study is offered, a review of the relevant literature that informs it is provided.

## CHAPTER 2

### REVIEW OF THE LITERATURE

Play is often considered by parents and educators to be the most natural part of childhood (Clements, 2004), yet not all play is viewed equally by children, parents and early childhood educators. R&T play, a commonly misunderstood form of aggressive play, has currently emerged as an acceptable form of play among some researchers, national organizations, and teachers; however, it is unclear whether early childhood educators support the use of R&T play in educational settings (Tannock, 2008). Current research suggests teachers, administrators, young children, and their parents have varying perceptions of the components and value of playful aggression such as R&T play (Bauer & Dettore, 1997; Boyd, 1997; Logue & Detour, 2011; Logue & Harvey, 2010; Tannock 2008).

The purpose of this literature review is to (a) summarize and analyze professional literature regarding the components of playful aggression, synthesize definitions of playful aggression, and discuss the role of playful aggression in child development, (b) summarize and evaluate the perceptions of playful aggression in early childhood, (c) reconceptualize playful aggression in early childhood settings, and d) define and discuss the application of modern research methodologies. This review begins with a discussion of common components of various types of playful aggression as described in professional literature; specifically, characteristics of aggressive play behavior, parallels of the various types of play identified as playfully aggressive, benefits of playful aggression, environments of playful aggression, and perceptions of playful aggression. Next, perceptions of playful aggression among young children, administrators, teachers,

and parents will be addressed followed by the reconceptualization of playful aggression and a discussion of common and innovative approaches to research in early childhood education. Finally, areas in need of further research regarding aggressive play will be identified.

### Literature Review Procedures

A systematic search through two computerized databases (e.g., ERIC and PsychINFO) was conducted. The following descriptors were used: rough and tumble, risky play, superhero play, dramatic play, weapons play, aggression, physical play, war play, gun play and active play. Per the recommendation of an expert in early childhood education, a search using the author names of Anthony Pellegrini, Peter Smith, and Tom Reed was also conducted to locate play-related information. Lastly, an ancestral search through the references of the obtained articles was completed.

### Selection Criteria

The majority of research included in this review was conducted within the last 10 years; however, articles by Bandura, Bauer & Dettore, Boyd, Carlsson-Paige & Levin, DiPietro, Fry, Pellegrini, Smilansky, Smith & Lewis, and Watson & Peng date back to as early as 1961 because of their early focus on various forms of playful aggressive behavior, and their significant research contributions to the field of early childhood education. This manuscript includes research that pertains to (a) early childhood policy and practice, (b) early childhood development, (c) outdoor play environments, and (c) adults' perceptions of play.

## Review and Analysis of Studies

Until recently, there was neither a cohesive definition of aggressive play nor a universal term that encompasses all forms of aggressive play in the current literature. Bridging statements with similar terms and characteristics that may be categorized together into the broad term of playful aggression, Hart and Tannock (2013) define playful aggression as verbally and physically cooperative play behavior involving at least two children, where all participants enjoyably and voluntarily engage in reciprocal role-playing that includes aggressive make-believe themes, actions, and words; yet lacks intent to harm either emotionally or physically.

### Characteristics of Playful Aggression

Malloy & McMurray-Schwarz (2004) define aggression as pretend when the participants recognize that the messages within interactions represent behaviors and objects within the play realm rather than reality. Jarvis (2007) states R&T is a set of enjoyable, physically, vigorous, and reciprocal behaviors, that include chasing, jumping and play fighting. Logue and Harvey (2011) define R&T to include superhero play, play fighting, chase games, and protect/rescue games. Pellis and Pellis (2007) state R&T play as synonymous with play fighting. Sandseter (2009) classifies R&T play as risky play, which she defines as a thrilling and exciting form of play that involves the risk of physical harm (Sandseter, 2007). Within her qualitative exploration of the affordances for risky play in two preschool outdoor environments, Sandseter (2009) identifies R&T play subcategories: wrestling/fighting, fencing with sticks, chase and catch, snowball war, wrestle/fight/fence, fighter roles (superheroes).

Current research involving rough-and-tumble play (Jarvis, 2007; Pellegrini, 1987; Smith & Lewis, 1984; Tannock, 2008), risky play (Sandseter, 2009), superhero play (Bauer & Dettore, 1997), “bad guy” play (Logue & Detour, 2011), active play (Logue & Harvey, 2010), play fighting (Hart & Tannock, 2013b; Pellis & Pellis, 2007), big body play (Carlson, 2011b), war play (Levin & Carlsson-Paige, 2006; Hellendoorn & Harinck, 1997; Malloy & McMurray-Schwarz, 2004), and physically active and imaginative play (Parsons & Howe, 2006) describe similar playful aggressive behavioral characteristics. Given the numerous terms used to define similar play behavior the development of an agreed upon universal term and definition for playful aggression in research literature is well needed.

#### Benefits of Aggressive Play

Physiologically, playful aggression is considered to be a beneficial form of social play that encompasses complex behaviors involving many areas of the brain. Using juvenile rats as test subjects, Pellis and Pellis (2007) demonstrated how R&T play—a category of playful aggression—leads to organizational changes in the areas of the brain involving social behavior. Specifically, male rats were introduced into established colonies to observe social competence. One group of male rats were reared in groups of rats allowing for R&T play while another group of male rats were reared in isolation without R&T play opportunities. Pellis and Pellis determined that rats reared in isolation displayed a significant deficit: they lacked the ability to calibrate movements with other rats, which provided foundational support of failure to develop emotional and cognitive skills. The authors’ findings concluded that play fighting patterns produce experiences that could improve social competence. Pellis and Pellis (2007) argue that if similar

patterns exist for rats and nonhuman primates, it is possible that R&T play in childhood is causally related to social competence later in life. This research is limited to observing social behavior among rats because it was not possible to conduct critical experiments with young children (Pellis & Pellis, 2007).

Types of aggressive behavior (e.g., R&T play, superhero play, big body play) are believed to be valuable components of early childhood with many developmental benefits, including social, emotional, cognitive, language, and physical development (Bauer & Dettore, 1997; Calabrese, 2011; Clements, 2004; Hewes & McEwan, 2006; Logue & Detour 2011; Parsons & Howe, 2006; Pellegrini, 1988, 1989; Reed & Brown, 2000; Reed et al., 2000; Sandseter, 2011). Play fighting provides young boys with perhaps their only opportunity to experience a caregiver's role of give-and-take as well as the feeling of being cared-for by their peers (Freedman & Brown, 2004). Recognizing these benefits, Parsons and Howe (2006) argue, "Providing opportunities to engage in superhero play opens up a multitude of creative possibilities and allows children the freedom to explore their world with a sense of empowerment and control" (p. 298).

#### Categories of Aggressive Play

The current literature also conceptualizes aggressive play behavior in a variety of different categories, including R&T play, risky play, fantasy play, superhero play, big body play, and war play.

#### Rough and Tumble Play

Play fighting, or R&T play, is a common social play type that is more frequent in boys' play; taking up approximately 10% of young children's outdoor free play (Smith et al., 2004). Having been extensively researched R&T play is often viewed as play fighting

that encompasses a diverse range of risky physical behaviors, including wrestling, play fighting, superhero play, weapons play, and monster or animal play; with or without violent language and themes; that is typically observed during outdoor free play (Bauer & Dettore, 1997; Calabrese, 2011; Dunn & Hughes, 2001; Freeman & Brown, 2004; Logue & Harvey, 2010; Parsons & Howe, 2006; Pellegrini, 1989a, 1989b; Reed et al., 2000; Sandseter, 2009; Smith et al., 2004; Tannock, 2008). R&T is an aggressive or violent play type—characterized by feigned aggression, sustainability, implicit rules of engagement, reciprocity, and cementing friendships—that is a highly sophisticated community-building activity enjoyed by skillful players rather than brought to an end by aggressive interactions (Freeman & Brown, 2004).

Pellegrini has independently and collaboratively observed and documented young children's R&T play for decades. Through interviews and observations of elementary children's play Pellegrini (1987, 1988, 1989a, 1989b, 1994, 2003) provides adults' and children's varying perceptions, identifies characteristics of the behavior, suggests the meaning and function of R&T play, recognizes gender differences, offers support strategies, discusses developmental benefits, and argues its appropriateness among social groups and within educational settings.

### Risky Play

While focused on children's right to engage in risky play, Sandseter (2007) aimed to develop specific risky play categories. Her qualitative study of 38 children (an equal number of males and females) and seven employees (three males and four females) from two Norwegian preschools involved a mix of direct observations and face-to-face interviews (i.e., of the 38 children participants eight were interviewed and observed,



while the remaining were only observed). The interviewed children were four and five years old (five females and three males), whereas the observed children ranged in age from three years to five years. Both groups were studied in one of two preschool environments. One preschool was considered an outdoor preschool with natural surroundings, while the other identified as an ordinary preschool with a traditional outdoor environment. The schools were chosen for their numerous opportunities for children to engage in risky play—in terms of both policy and environment. Although the author does not mention establishing a rapport with the children, Sandseter (2007) collected field notes through participant observation of two groups of children over four days. Subsequent to the observations child and adult participant interviews established perceptions of types of play as being risky and why participants considered various types of play to be risky.

A coding analysis of the data created six risky play categories: (a) play with great heights, (b) play with high speed, (c) play with harmful tools, (d) play near dangerous elements, (e) rough-and-tumble play, and (f) play where the children can “disappear”/get lost (Sandseter, 2007). Due to the nature of risky play involving the potential for harm Sandseter (2007) considered R&T as a category of risky play. The author states R&T play is high-risk because of the intricacies of identifying play versus real fighting. Play fighting, fencing with sticks/branches, and play wrestling were recorded and categorized as R&T (Sandseter, 2007). Child interviews revealed that, although the children’s fear perception varied, all but one boy perceived R&T play as enjoyable. Adult interviews concluded that some characteristics of R&T play (e.g., wrestling and play fighting) were not viewed as risky compared with other components (e.g., fencing with sticks, hitting,

and tripping). Limitations of this study include a small sample size (n=38), purposeful sampling—which limits the generalizability of the findings, an undeveloped structured observation tool, and the threat of children not exhibiting natural behavior. Therefore, further research to validate the categories is needed.

### Fantasy Play

Beginning during two years of age and peaking during the late preschool years fantasy play involves actions, use of objects, nonliteral language, and distinct roles (Pellegrini & Smith, 1998). Young girls' fantasy play is more frequent and sophisticated, typically revolving around domestic themes; while play fighting and superhero themes dominate young boys' fantasy play (Pellegrini & Perlmutter, 1987; Pellegrini & Smith, 1998). As such, the suppression of playful aggression in early childhood settings may eliminate young boys' fantasy play altogether.

In a much more analytically rigorous investigation Dunn and Hughes (2001) examined the influence of violent fantasy play on antisocial behavior, friendship, and moral sensibility among four-year-olds living in the UK. Using a qualitative approach the researchers identified 40 children with behavior disorders (i.e., "hard to control" children) from a representative sample of UK school children. They matched these children with a control group of 40 additional children selected from UK schools. Researchers matched the hard to control children with the control group children based on gender, age, and school or neighborhood.

Dunn and Hughes's (2001) data collection was based on two 20-minute observation periods of partnered children's play behavior. The interactions were videotaped, transcribed, and coded for analysis. The observational measures included

pretend play, interactive play with friends, expression of emotion, response to emotion, and pro-social behavior. Data were analyzed using ANOVA, comparing differences in behavior between groups of children. Results suggested that (a) hard to manage boys in the control group engaged in a higher proportion of violent pretend play, (b) lower verbal ability related to higher violent pretend play as well as higher coordinated action related to more pretend violent play, and (c) more children in the “hard to manage” group engaged in violent play involving hurting or killing. In sum, children who engaged in violent pretend play more frequently were significantly associated with poor peer relations and with antisocial and serious aggressive behaviors such as bullying, teasing, violence, and rule breaking. The implications of Dunn and Hughes’s work (2001) suggest that children of varying developmental levels engage in violent fantasy play and that different outcomes of this behavior can influence antisocial behavior, friendship, and moral sensibility. This is relevant because most teachers are confronted with violent fantasy play in the classroom and to strictly prohibit it may not be best practice. That is, we need to better understand how children with varying social skills engage in fantasy play in order to redirect antisocial behaviors when they are presented.

### Superhero Play

Parsons and Howe (2006) discuss superhero play as alluding to aggression or violence; however, they also recognize that the child participants were engaged in enjoyable imaginary physical play. Their study investigated the influence of superhero toys on 4-year-old boys’ physically active and imaginative play from a quantitative and qualitative perspective. Specifically, they were interested in the (a) frequency of superhero play, (b) themes and roles enacted, (c) level of physical activity, and (d)

incidence of aggression. A total of 58 four-year-old boys attending one of 12 childcare centers in a large metropolitan area as well as those boys' parents were included in the study. Only those boys who received parental permission were involved in the classroom research. The boys and their preferred play partners were placed in dyads. Preferred play partners were established through a peer nomination process. After a 5-minute warm-up play session the children were videotaped at play during two 8-minute sessions. The first 8-minute session allowed children to play with superhero toy figures. The second session allowed children to play with nonsuperhero toy figures. A final component of the research included a parental questionnaire of demographic information and television watching habits.

Parsons and Howe (2006) found that 4-year-old boys engaged in a significantly higher level of physical activity with nonsuperhero toys. Of great significance is the authors' finding that physical and verbal aggression was not observed in either the superhero or nonsuperhero play condition. Results indicated that boys lacked physical or verbal aggression during either play condition, displayed greater frequency of character roles during the session with superhero toys present, and engaged in more physical activity and domestic/housekeeping themes during sessions with nonsuperhero toys. The implication of this study is that educators and professionals can compromise with children by allowing them to freely engage in make-believe play, thus benefiting children's development of social and language skills. This emphasizes the belief that superhero play has relevance to children's social, communicative, cognitive, and motor development. Parsons and Howe (2006) also suggest that the field of early childhood education would benefit from future research that attempts to clarify why superhero play

is viewed as aggressive. The authors provide support for the importance of superhero play in early childhood education; however, they note several limitations of their study including (a) a small sample size, (b) a lack of a diverse sample population, (c) results that are not generalizable, and (d) a brief period of time for observations.

### Big Body Play

Carlson (2011b) describes boisterous, large motor, very physical activity that young children naturally crave as big body play. In *Big Body Play: Why Boisterous, Vigorous and Very Physical Play is Essential to Children's Development and Learning* Carlson (2011b) offers a definition, characteristics, and benefits of big body play as well as strategies for its support in early childhood settings. This knowledge was obtained through previous independent and collaborative research involving child observations, teacher interviews, and reviews of current literature.

Some characteristics of big body play include rolling, falling, tumbling, rough-and-tumble, rowdy, roughhousing, horseplay, and play fighting (Carlson, 2011b). Young children from infancy voluntarily engage in big body during solitary play, parallel play, or group play (Carlson, 2011b). The researcher suggests big body play is an appropriate play that has physical, emotional, cognitive, and social benefits. In early childhood settings many adults question the appropriateness—much less the developmental necessity—of big body play; however, young boys in particular, experience communication and social benefits such as the development of empathy and self-regulation (Carlson, 2011b). Carlson (2011b) provides the following strategies for integrating big body play into early childhood settings: (a) manage risk, (b) establish policies for safe play, (c) prepare the environment, (d) provide teacher support, and (e)

communicate and collaborate with families. However, playful aggression predominantly remains unsupported in early childhood classroom (Freeman & Brown, 2004; Hart & Tannock, 2013b).

### War Play

War play is defined by Malloy & McMurray-Schwarz (2004) as a form of imaginary play that includes episodes of pretend aggression and involves acting out roles of violence, aggression, or war witnessed or experienced by children. Attempting to address concerns regarding gun play, Watson and Peng (1992) assessed the long-term effects of sustained toy gun play on children's serious aggression. Using a sample of thirty-six 3- to 5-year-old children attending daycare—19 girls and 17 boys—children's gun play was observed and videotaped. Parental participants completed a questionnaire that provided demographical information, the amount of toy guns available at home, the frequency of their child's gun play, their child's preferred television programs and toys, and the amount of physical punishment and other disciplinary actions by the parents.

Using multiple regression analyses the researchers measured the influence of parental physical punishment, aggressive television programs, gun play, aggressive toys, and gender on children's real aggression, pretend aggression, nonaggressive pretend play and R&T play. Interestingly, R&T was categorized separately from pretend aggression. Upon realizing a difference in frequency gender differences were measured. Results indicate that although gun play was a predictor, parents' physical punishment was the strongest predictor of real aggression (Watson & Peng, 1992). Additionally, boys' gun play was the greatest predictor of real aggression when gender was separated (Watson &

Peng, 1992). Gun play was the second strongest predictor of real aggression, however, the majority of real aggression involved fights over toys (Watson & Peng, 1992).

Watson and Peng (1992) conclude that toy gun play is not associated with many positive behaviors; however, the research did not measure positive behaviors. A measure of participants' prosocial skills, such as communication and conflict-resolution, may yield results indicating toy guns are not a significant predictor of real aggression, rather the children's lack of essential social skills not yet mastered as a preschooler. "As children's language and thinking skills develop, adults scaffold their social participation at increasingly higher levels, withdrawing support when children are observed to use prosocial behaviors with their peers and increasing support when instances of aggression are noted" (Girard, Girolametto, Weitzman & Greenberg, 2011, p. 309).

Parents, educators, and psychologists have differing opinions regarding the potential benefits and harm of war toys in children's play (Hellendoorn & Harinck, 1997). In previous studies regarding war play, researchers failed to consider important contextual variables; therefore, the conclusions drawn are not based on strong scientific evidence (Hellendoorn & Harinck, 1997). To address this issue Hellendoorn and Harinck (1997) investigated the relationship between children's aggressive behavior in the presence of war toys in relation to the following factors: (a) attitude of parents to war toys, (b) family demographics and amount of war toys in the home, (c) typical daily aggressive behavior of each child, (d) characteristics of the play situation and of the toys, and (e) the child's playmates and their behaviors.

The study took place across three Netherland schools where a war toy policy was not in place. Fifty-four 4- to 7-year-old children were assigned to single-gender play

groups (with one exception) of three members with whom they previously established friendships (Hellendoorn & Harinck, 1997). Each group was observed during one half-hour play sessions in a “play room” that housed about 30 types of toys: neutral toys such as farm and zoo animals, baby dolls, train, puppets, sand-and-water table; and war toys such as soldiers, cowboys, GI Joe<sup>®</sup>, Ninja Turtles<sup>®</sup>, pistols, guns, swords, castles, and armed spaceships (Hellendoorn & Harinck, 1997). Five nominal categories—(a) no aggression, (b) make-believe or fantasy play aggression, (c) playful imitation of aggressive story, television show, or movie; (d) R&T play or play fighting, and (e) real aggression—were established to record various aggressive behavior (Hellendoorn & Harinck, 1997). Serious aggression was further differentiated into six subcategories: (a) physical assault, (b) physical threat or aggressive gesture toward another person, (c) verbal aggression, (d) object aggression such as breaking a toy, (e) snatching things away from another child, and (f) other and undirected aggression (Hellendoorn & Harinck, 1997). After each play session children were interviewed regarding their toy and play preferences, and preferred play partner. The following data were collected through parent and teacher questionnaires: attitude of parents to war toys, family demographics, amount of war toys in the home, and typical daily aggressive behavior of each child (Hellendoorn & Harinck, 1997).

Results indicate that a major influence on all children’s aggressive behaviors (playful or serious) was formed by the context of their play partners’ behavior; in this particular context serious aggression was rare. In contrast to Watson and Peng (1992), family background variables and possession of war toys at home was not related (Hellendoorn & Harinck, 1997). Interestingly, children whose parents were opposed to



war toys played with weapons more often and displayed more pretend aggression than other children. The authors suggest that R&T play and real aggression share some characteristics, yet it is unlikely that R&T play leads to serious aggression due to their different intention (Hellendoorn & Harinck, 1997). Additional research is recommended as this study offers some insight into different kinds of play behavior during war toy play, but does not warrant any conclusions about the relationship between war toy play and aggression (Hellendoorn & Harinck, 1997).

The substantial discrepancies described by Hellendoorn and Harinck (1997) between the two female observers in the first observation trial session is of particular interest. The authors offer two explanations. First, female observers, in particular, tend to confound playful aggression and real aggression, and second, observers may be biased to interpret their observations according to their personal values (Hellendoorn & Harinck, 1997). This finding supports the perceptual gender differences identified in more recent literature.

#### Perceptions of Aggressive Play Types

The perception of R&T play is an important aspect of aggressive play and may directly affect whether a child is permitted to engage in such activity. Current research suggests teachers, administrators, young children, and their parents have varying perceptions of the components and value of R&T play (Bauer & Dettore, 1997; Fletcher et al., 2011; Logue & Detour, 2011; Logue & Harvey, 2010; Pellegrini, 1989a; Smith & Lewis, 1984; Smith et al., 2004; Tannock, 2008). Although past research demonstrates a rise in aggression in young children's play, evidence to support this claim is derived from surveys and anecdotal reports of a non-random sample of preschool teachers, parents, and

early childhood professionals (Carlsson-Paige & Levin, 1987, 1995). In contrast, using time interval sampling Boyd (1997) demonstrates the frequency of aggressive play is actually low and suggests that teacher reports of the occurrence and nature of superhero play by Carlsson-Paige & Levin (1987, 1990, 1995) may not be entirely objective.

In an attempt to address this issue, Logue and Harvey (2010) explored preschool teachers' views of active play. Specifically, they focused on pre-K teachers' ideas about the role of dramatic play in addition to their attitudes and practices toward R&T play. Their quantitative and qualitative exploratory study involved a survey of 98 northeastern state public pre-K teachers and Head Start teachers of 4-year-old children. The authors used the Preschool Teacher Beliefs and Practices Questionnaire, which is a researcher-developed survey. Following the survey open-ended interviews were conducted.

Results showed that teachers have diverse views of R&T play and its relevance in early childhood education. While some teachers anticipate children's desire for R&T play and prepare for it, others anticipate danger and prohibit or stop it immediately. It is important to note that 46% of participant respondents had a "no-tolerance" policy in place, while 54% did not. Additionally, there was variation in how the policies were created. Logue and Harvey (2010) noted that some "no-tolerance" policies were made by teachers and not dictated by their school. This study implies that pretend fighting tends not to escalate into true aggression and results appear to suggest that teachers may not be making the distinction between play fighting and real fighting in their interventions. Because literature suggests there is social and cognitive value to R&T play (Bauer & Dettore 1997; Logue & Harvey, 2010; Parsons & Howe, 2006) further investigation into playful aggression is needed.

Tannock's (2008) exploratory study examined the controversy around R&T play to better understand how educators and children interpret this controversy. The participants in this study were 11 educators and 17 five-year-old children from two childcare facilities in a mid-sized city on the Canadian west coast. Educators were interviewed during their work hours in an office or room at their worksite. Specifically, educators were asked to describe their childcare program's guidelines regarding R&T play, to explain how they would describe R&T play to parents, to clarify if provisions for R&T play were in their program, and to identify benefits of R&T play. The audio taped, open-ended interviews were later transcribed for analysis. Similarly, children's audio taped, open-ended interviews were conducted in small groups at their schools and later transcribed for analysis. Children were asked to express their thoughts of R&T play, to discuss rules for play at their school, to determine if R&T play happens indoors or outdoors, to explain the consequence of engaging in R&T play at school, and to articulate their teacher's perception of R&T play.

Results of Tannock's (2008) study indicated that both educators and children acknowledged R&T play as a prevalent activity; however, educators perceived it as inappropriate in early childhood facilities. Tannock's findings suggest R&T play is not clearly defined; therefore, educators react differently to R&T play based on their individual perception. Because R&T play is a common activity among young children it is important to balance safety with the benefits of child development. Further research is therefore needed to determine how factors associated with R&T play affect how it is perceived by children, educators, and parents and how those factors affect perceptions differently.

Recognizing adults' struggle with the issue of children's aggressive play Bauer and Dettore (1997) debate the pros and cons of permitting or banning such play at home and elsewhere by examining adults' beliefs about superhero play. Although they provide no clear description of their participants, analytic approach, the variables measured or hypotheses tested, they do offer some general conclusions based on their qualitative observations of children's behaviors and parents' responses to it. They conclude that teachers can develop strategies for managing superhero play and can redirect children's actions toward appropriate expression. This implies that teachers of young children must respect and allow children to select themes and roles, but that teachers must provide the boundaries in which these themes and roles occur.

After lengthy attempts by educators in a laboratory school at a public university to banish boys' dramatic play involving aggressive themes ("bad guy" play), Logue and Detour (2011) researched collaborative efforts of educators to allow this play in an effort to learn more about its meaning to children and teachers. Participants included 12 three- to four-year-old children in a northeastern preschool and two adult educators; a lead teacher who was a graduate student in child development and a student teacher who was an undergraduate in an early childhood education program. Researchers observed the teacher's interactions with children, inquired about curriculum discussions in staff meetings, and reviewed teachers' journal entries regarding "bad guy" play among the children. The authors provide dialogue and descriptive accounts of children and educators engagement in "bad guy" play. Of most significance is Logue and Detour's (2011) conclusion that girls are just as likely to engage in aggressively themed dramatic play as boys. Further results found in journal entries of participating teachers indicate continued

discomfort with supporting themes perceived as aggressive (Logue & Detour, 2011). Additionally, adults often choose and redirect dramatic play to themes considered appropriate and safe (Logue & Detour, 2011). Throughout this study the participating educators realized that pretend aggressive play is beneficial to child development in contrast to actual aggressive behavior (Logue & Detour, 2011). Finally, Logue and Detour's research (2011) supports dramatic play skills (e.g., cooperation, planning, impulse control, and memory) as beneficial to future school success. Because the participant sample size was small (12 children and 2 adults) and the preschool was chosen out of convenience this study does not present a representative sample, thus reducing generalization.

The opportunities for children's risky play behavior were correlated to the degree of tolerance by supervising staff in a quantitative exploration of the opportunities for risky play by Sandseter (2009). The risky behavior of 29 participants (21 females and 8 males) ages four- and five-years-old were studied through video observation during outdoor play, and 23 children were interviewed regarding outdoor play and risky play. This study took place in two Norwegian preschools using purposive sampling. One school is described as an ordinary school with a fixed and fenced playground, while the other is described as a natural and outdoor preschool as it was situated in a forest and had neither a fixed nor fenced playground. Children's play and staff supervision were observed over seven days within each school using video and field notes. Data collection was based on previously developed categories of risky play: (a) play with heights, (b) play with speed, (c) play with dangerous tools, (d) play near dangerous elements, (e) R&T play, and (f) play where the children can disappear or get lost (Sandseter, 2007).

The researcher conducted one-to-one qualitative semi-structured interviews with 12 children in the ordinary preschool and 11 children in the nature and outdoor preschool to explore types of risky play—based on Sandseter’s (2009) six categories of risky play—alongside the constraints or interventions of supervising staff. Sandseter (2009) analyzed each play environment’s opportunities for risky play, defined the types of risky play within each environment, and determined the degree of allowance for risky play by staff. Results indicated that the opportunities for risky play were directly related to the staff’s level of tolerance or intolerance of risky play. Sandseter (2009) concluded that neither play environment offered a higher frequency of risky behavior; however, the nature and outdoor preschool environment exhibited a higher level of risk because the environment was more challenging and offered more risk during children’s play. This exploratory research contributes to early childhood education by introducing a need for further research, yet the results are not generalizable due to the limited number of participants and locations.

In a recent study of adult attitudes on young children’s risk-taking behavior, Little et al. (2011) considered factors that impact opportunities for risky play and adults’ safety concerns. Little et al. (2011) discussed the debate of ensuring children’s safety and the short- and long-term impact on children’s development and psychological well-being. Based on the current literature, the authors noted a reoccurring theme of childhood being a time for increasing independence and learning to manage risks. Simply put, Little et al. (2011) aimed to demonstrate what constitutes risky play by investigating adults’ attitudes towards risk-taking and whether contexts of the play impacts children’s experiences of risky play (Little et al., 2011). The authors define risky play as play that is challenging,

that tests limits, and that may result in injury. This study focused on the influential factors of the early childhood education center (ECEC) setting in comparison with the neighborhood setting, and adults' attitudes and support of children's risky-taking behavior.

Twenty-eight children, 26 parents of those children, and 17 practitioners in five early childhood centers located in Sydney, Australia participated in this study. Children were video-recorded as they engaged in free play at their local playgrounds and ECEC. These naturalistic observations were recorded and coded for analysis. Adult perceptions were measured using formal questionnaires, semi-structured individual interviews, and naturalistic observation of adults and children at play or the adult supervision of children during play. A significant difference in perceptions of risky play between teachers and parents was evident in the results of this study. All adults believed that it was necessary for children to take risks to foster skill development, build confidence, and learn how to avoid injury. In contrast, both parents and teachers expressed opportunities for risk-taking behavior in both outdoor settings was either limited or nonexistent due to strict program policies and less challenging environments. Paired-samples t-tests determined differences in children's risk-taking behavior between play settings. Higher levels of risky play were observed at neighborhood parks compared with extremely low levels of risky play at ECEC playgrounds. Both teachers' and parents' interactions with children were contingent upon the children's level of risky play. Limitations include a majority of adult female participants; only two males (one teacher and one parent) participated. Therefore, gender differences of perceptions could not be analyzed.

Fletcher et al. (2011) present the male perspective by examining fathers' perceptions of their own R&T interactions with their child. As part of a weight loss program for overweight fathers with children, this exploratory study links R&T play with developmental outcomes for young children, and analyzes fathers' R&T-related responses through semi-structured telephone interviews upon completion of the program (Fletcher et al., 2011). Fifty-three overweight or obese men and 71 children—ages six to twelve years—from New South Wales, Australia, participated in the study. The fathers were randomly dispersed into two groups: treatment group and control group. Although 25 fathers participated in the 15- to 45-minute interview process, only 16 were asked additional questions about R&T play. The child participants among the 16 fathers included nine boys and seven girls.

The interview process consisted of exploratory questions pertaining to fathers' past experiences of physical play with their children, their attitudes to risk in physical play, their thoughts regarding competitive play within the parent-child dyad, and their perception regarding the importance of R&T play for their children's development (Fletcher et al., 2011). Using a qualitative descriptive design, results indicate that the father participants identified the behavioral characteristics (e.g., competition & risk taking) within R&T play enhances their father-child relationship and benefits their children's development. For example, the fathers' self-handicapping behavior was identified as strengthening the father-child bond, while the exertion of strength by the father to defeat his child and risk were identified as beneficial to their child's development (Fletcher et al., 2011).



Because an estimated 95% of childcare workers in the U.S. are women (U.S. Bureau of Labor Statistics, 2011) fathers' perceptions of playful aggression are valuable for early childhood professionals (Fletcher et al., 2011) as they offer a male's perspective in a female dominated profession. Additionally, findings from this study may offer support for teachers' understanding and allowance of R&T play behavior within early childhood educational settings (Fletcher et al., 2011).

For a greater understanding of playful aggression in context, several researchers offer the perspectives of children. Pellegrini (1989a) describes relations between elementary school children's R&T play and their social competence. Children participants (grades K, 2, and 4) were observed and video recorded on the school playground during recess. Of the 94 participants 26 (11 boys and 15 girls) were identified as popular and 16 were identified as rejected (11 boys and 5 girls). As such, child interviews were also conducted to further investigate R&T play for popular and rejected children. Participants were shown videos of 10 aggressive episodes and asked if the behavior was *play fighting* or *real fighting*.

Pellegrini (1989a) categorized R&T play by two factors: (a) playful provocation (e.g., poking and teasing) and (b) rough-house play (e.g., kick at, play, fight, chase, and push). The analysis indicated both behavioral factors were only playful for popular children and did not escalate into real aggression for most children, whereas the behavioral factors for rejected children indicated displays of serious aggression, not play. Results suggest R&T play for popular children led to games-with-rules. In contrast, R&T play for rejected children led to serious aggression, therefore, children's R&T play was positively correlated with measures of social competence.

Smith and Lewis (1984) observed and video recorded the behavioral differences between R&T play and serious aggression in a class of preschool children: 16 boys and 10 girls aged 3- to 4-years. Perceptions were also documented through adult and child interview recordings and transcriptions. During the interview participants were asked to identify the behavior in the videos as *playful* or *really fighting* as well as provide a brief explanation of their opinion. Findings suggest that R&T play is an enjoyable activity engaged by friends, promotes social skills, and fosters peer bonding (Smith & Lewis, 1984). The researchers conclude that some adults and preschool children can discriminate between playful and serious aggression with reasonable accuracy and agreement (Smith & Lewis, 1984), therefore, identifying R&T as a form of social play, not serious aggression.

More recently, Smith, Smees, and Pellegrini (2004) studied 5- to 8-year-old children's perceptions of their own playful aggressive behavior. Forty-four boys were observed during recess for one ½ hour of nine school days. Forty-two episodes of young boys and girls engaged in playful or serious fighting were edited, sequenced, and viewed by the participants.

Results of this study reveal that participants appear to have a better understanding of playful aggression perhaps because of their unique insights into the nature and motivation of play fighting (Smith et al., 2004). For example, non-participants did not experience whether a hit or kick actually hurt or whether an apparently aggressive act was within the game framework (Smith et al., 2004). In sum, participants compared to non-participants, view R&T play as playful, not serious aggression (Smith et al., 2004).

### Reconceptualizing Playful Aggression

It is likely that educators restrict R&T play due to an inadequate understanding of its benefits (Little et al., 2008). “R&T play is not well understood and not easily facilitated in early childhood settings” (Fletcher et al., 2011, p. 137). Since the 1990s, violence in schools has received considerably more attention than in previous eras with strict policies in place (e.g., zero tolerance) to curb behavioral problems, including aggression (Miethe & Deibert, 2007). The conventional view is that rough play should always be suppressed, however, that view fails to make the distinction between playful and serious aggression (Freeman & Brown, 2004).

The first five years of life can be viewed as the optimal opportunity for supporting the development of emotional and behavioral regulation and communication (Keenan, 2012). Physical aggression—an unlearned behavior that begins between one and two years of age—tends to increase with frequency until approximately 3 ½ years of age, therefore, young children need to learn alternative behaviors (Tremblay, 2012). As teaching prosocial behaviors in preschool is a common approach to preventing young children’s aggression (Girard et al., 2011), supervising adults have ample opportunities to support positive social interactions among young children whether painting a portrait in the art center or wrestling indoors on tumbling mats.

Research indicates that preschool is a sensitive period for learning to regulate physical aggression (Tremblay, 2012) given aggressive and disruptive behavior is one of the most enduring dysfunctions in children (Lochman, Boxmeyer, Powell, & Jimenez-Camargo, 2012). Preschool-age children who have not developed age-appropriate self-regulation skills are at high risk for chronic aggression and antisocial behavior (Keenan,

2012); therefore, banning R&T play may be counter-productive (Pellis & Pellis, 2012). Supporting aggressive play within educational settings will allow additional and continual opportunities to foster prosocial skills such as caring, turn-taking, perspective-taking, and conflict resolution. Because real fighting occurs in only about 1% of play fighting bouts (Smith et al., 2004), the possibility of superhero play or R&T play leading to serious aggression seems no different to any other learning activity. Moreover, learning prosocial behaviors is a gradual process learned in part through adult mediated practice (Girard et al., 2011); therefore, it seems fitting to embed prosocial skill development into an activity young children find appealing. Group interactions provide opportunities for adults to encourage cooperative play, redirect children to ask each other for help, suggest roles during dramatic play, or script play for children requiring more support (Girard et al., 2011).

Although males predominantly perceive playful aggression as beneficial to child development (Fletcher et al., 2011), females make up the majority of childcare workers in the U.S. (U.S. Bureau of Labor Statistics, 2011) and are prone to creating learning environments that reflect and value feminine ways of interacting and behaving (Freeman & Brown, 2004). Therefore, it is unlikely that teachers' classroom preparation will support playful aggressive activities such as superhero play and R&T play. Because girls engage in playful aggression less often than boys (Carlson, 2011b; DiPietro; 1981; Freeman & Brown, 2004; Hewes & McEwan, 2006; Levin & Carlsson-Paige, 2006; Reed et al., 2000; Sutton-Smith, 1988) teachers' lack of support may be a result of aggressive play being outside of their personal experience (Freeman & Brown, 2004). Freeman and

Brown (2004) assert that R&T play has long-term benefits to children's development and adults should create settings that welcome and encourage such play.

Freeman and Brown (2004) contend that rather than banning R&T play teachers should reconceptualize their view by preparing environments that help all children form affiliations and friendships according to their personal strengths and preferences. Early childhood programs should support boys' and girls' play choices, recognizing that each child has a unique repertoire of interactional styles that prepare them to cooperate with a diverse peer group (Freeman & Brown, 2004). R&T play is a highly developed form of socialization that offers children, particularly boys, opportunities to create and sustain friendships (Freeman & Brown, 2004). As with all children's activities, R&T requires supervision that gives children freedom from adult interference (Freeman & Brown, 2004). Freeman and Brown (2004) offer eight broad support strategies for early childhood professionals: (a) permit both boys and girls to participate, (b) create a wide-open space reserved for R&T play, (c) provide at least ½ hour per day to fully develop their play episode, (d) provide close supervision and immediate support for children's physical and emotional security, (e) educate teachers and parents about the characteristics of R&T as compared to serious aggression, (f) educate children about R&T play by making rules, discussing concerns, and providing strategies to join or opt out of the play, (g) add R&T play into professional development programs, and (h) conduct R&T research to contribute to the field of early childhood education. More recently, Hart and Tannock (2013b) provide more specific support for implementing playful aggression into early childhood programs.

Bridging the gap between research and practice Hart and Tannock (2013b) provide support strategies for teachers and teacher training programs that serve as a foundation for the inclusion of playful aggression within early childhood programs. Hart and Tannock (2013b) clarify definitions of serious aggression and playful aggression (see Table 1), conceptualize the importance of various forms of playful aggression in child development (see Table 2), and provide strategies for educators when confronted with playful aggression in their classroom (see Table 3). Without a full understanding of the distinct difference between playful and serious aggression early childhood professionals may react with concern and send conflicting messages to young children regarding the appropriateness of playful aggression (Hart & Tannock, 2013b).

As supported by Freeman and Brown (2004), Hart and Tannock (2013b) note supervision as a key component for supporting playful aggression in early childhood settings. Young children need clear directions, the establishment of rules, and reinforcement or redirection from teachers to ensure their developmental growth and safety (Hart & Tannock, 2013b). To determine what actions constitute playful aggression and serious aggression, teachers should collaborate with children to establish consistency among participants and supervising teachers (Hart & Tannock, 2013b).

The proposed research directly addresses the issue of collaborative consistency among supervising teachers as raised by Hart and Tannock (2013b). The results may be used as a framework to open dialogue among educators in an effort to establish perceptual consistency within a specific early childhood setting. The quantitative data may be used as a guide for discussion, while the qualitative data may provide insight as to the influences regarding varying perceptions of playful and serious aggression. Both types of

data will assist with the establishment of aggressive play and policy within educational practice.

Table 1

*Differentiating Serious Aggression From Symbolic Aggression*

Categories	Aggressive Behavior	
	Serious	Playful
Motivation	Intent to injure (Anderson & Bushman, 2002; Bandura, 1978; Robertson, Daffern, & Bucks, 2011) Intentionally damaging play material (Hellendoorn & Harinck, 1997) Child is willing to inflict pain on another (Gomes, 2007)	The target is motivated to avoid the behavior (Anderson & Bushman, 2002) Accidental injury (Pellegrini, 1987; Sandseter, 2007) Cooperative (Smilansky, 1990) Voluntary (Pellis & Pellis, 2007) Does not involve pretense (Pellegrini, 1987)
Duration	Brief (Fry, 1987)	Long (Fry, 1987)
Chase & Flee	The child fleeing runs faster, straighter, and rarely looks over shoulder (Fry, 1987; Humphreys & Smith, 1984)	The child fleeing runs at half-speed & frequently looks over shoulder at chaser (Fry, 1987)
Actions (i.e. hitting)	Physical actions are not restrained (Fry, 1987) Physical assault/Snatching toy away (Hellendoorn & Harinck, 1997) Wrestling is uncommon (Fry, 1987)	Physical actions are restrained (Fry, 1987) Includes wrestling (Fry, 1987; Scott & Panksepp, 2003)
Body Language	Bodily threat (Hellendoorn & Harinck, 1997)	Relaxed muscle tone (Fry 1987) Smiling and/or laughing (Fry, 1987) Play face indicates enjoyment (Tannock, 2008) Imitation of aggression, Fantasy aggression, Rough-and-tumble (Hellendoorn & Harinck, 1997) Self-handicapping (Fry, 1987) Engage with friends (Fry, 1987) Prosocial (Scott & Panksepp, 2003)
Emotional	Child lacks empathy, child needs a sense of control, torment is evident (Gomes, 2007) Anger is an underlying role in aggression (Anderson & Bushman, 2002; Robertson, Daffern & Bucks, 2011) Antisocial (Scott & Panksepp, 2003)	High-pitched happy sounds (Fry, 1987)
Expressive	Verbal aggression (Hellendoorn & Harinck, 1997)	High-pitched happy sounds (Fry, 1987)
Role Reversal	Roles are not exchanged (Fry, 1987)	Role reversal (Fry, 1987; Pellegrini, 1992)
Control	Power imbalance (Gomes, 2007), Dominance (Fry, 1987)	
Group Size	Rarely more than two children involved (Fry, 1987)	Involves two or more children (Smilansky, 1990; Parten, 1932; Pellegrini, 1988)
Climate	Draws a crowd of onlookers (Fry, 1987)	Does not draw a crowd (Fry, 1987)



Table 2

*Benefits of Symbolic Aggression*

Play Type	Types of Aggressive Sociodramatic Play	
	Characteristics of Behavior	Developmental Benefit
Superhero play	Running, jumping, wrestling, and shouting (Bauer & Dettore, 1997)	Social-Emotional: develop concepts of right and wrong, good and bad; cooperation Aesthetic Development: fosters creative expression Cognitive Development: children engage in higher level thinking and creativity to sustain a role and cooperatively develop a play theme; practice problem-solving
“Bad guy” play	Superhero play, war & stealing (Logue & Detour, 2011)	Language: opportunities for teachers to foster language development Social-Emotional: opportunities for teachers to support confidence; children practice negotiation & cooperation skills, share ideas, and are more inclusive with peers. Cognitive: opportunities to experience others’ perspectives; repetition allows for role-playing changes and experience different outcomes; develop conflict resolution skills
Active pretend play	Superhero play, play fighting, (including wrestling), chase games, and protect/rescue games (Logue & Harvey, 2010)	Social: explore social boundaries, determine social placement in a group Physical: practice and test level of strength, determine agility, develop and practice restraint as they pretend to be aggressive
Play fighting	Voluntary social play Competitive rough-and-tumble play or play fighting Playful attack by one partner coupled with playful defense by the other Attack and defense roles alternate (Pellis & Pellis, 2007)	Social: development of typical social behavior patterns, improved competence later in life Physical: develops coordination of appropriate body movements Cognitive: produces experiences with immediate feedback for some brain areas that regulate social behavior and general cognition
Rough and tumble play	An enjoyable play-fighting and chasing activity played among friends (Smith & Lewis, 1984) Contact or Mock contact mimicking aggression Hold/grab/restrain other child, hit and run, hit/kick, wrestle/pin, trip, shoot, boxing, light blow (Jarvis, 2007)	Social: coordination of activities and allocation/alteration of roles Social: practice spontaneous and autonomous competitive and cooperative interactions simultaneously Language: fosters linguistic responses & create shared narratives among peers Physical & Cognitive: Spontaneous interactions within the social ‘classroom’ of the playground; practice controlled and motivated behavior related to both competition and cooperation; test and recalibrate interaction skills after receiving immediate feedback; improve physical movements

Table 3

*Strategies for Supporting Symbolic Aggression*

Aggressive Play		
Category	Strategies	Support
Designate a play space	Large, soft floor area <ul style="list-style-type: none"> <li>• A minimum of 25 sq. ft. is suggested (Smith &amp; Connolly, 1980; Pellegrini, 1987)</li> </ul>	Indoors <ul style="list-style-type: none"> <li>• Tumble mats</li> <li>• Create a wrestling centre</li> </ul>
	Uninterrupted area <ul style="list-style-type: none"> <li>• Free from non-participating peers</li> <li>• Free from learning activities</li> </ul>	Outdoors <ul style="list-style-type: none"> <li>• Tumble mats</li> <li>• Grassy area</li> </ul>
Supervision	3-year olds	Close proximity. Stand or sit to support and facilitate the play. Avoid engaging in the play.
	4-years and older	Distant proximity. Stand or sit close enough to hear and see. Avoid eye contact. Children may relocate each time they know you are watching. Avoid engaging in the play.
Accessories	Throw pillows, Squish therapy pillows Foam weapons, toy guns, & small beanbags Capes, masks, costumes, wands, walkie talkies, and plastic handcuffs	Pillow fights Sword fights, blasters, & beanbag bombs Superhero or Fantasy play: Batman, Cops & Robbers, Harry Potter, & Star Wars
Group Size	3-year-olds	Two children (rotate participants)
	4-years and older	Two or more children Smaller groups express more positive affect: creativity, cooperation, communication
Children's rights	Involve children in discussion and decision-making that may affect them	Collaborate with children to develop a behavior chart: play vs. non-play
Safety Rules	Be Safe <ul style="list-style-type: none"> <li>• No touching or aiming at head &amp; neck</li> <li>• Soft hitting, kicking, punching</li> <li>• Soft pushing, pulling, tackling, wrestling</li> </ul>	Discuss rules daily Add rules as needed
	Build Trust <ul style="list-style-type: none"> <li>• Stop the play if friend is not happy</li> <li>• Stop the play if friend is injured</li> <li>• Stop the play if friend is scared</li> <li>• Stop the play if friend is angry</li> </ul>	Anticipate conflicts and support resolutions <ul style="list-style-type: none"> <li>• A participating child is not considered to be a friend of other participants</li> <li>• A participating child often exerts serious aggression elsewhere</li> <li>• Participants are not following the rules</li> <li>• Participants cannot agree on their assigned roles</li> </ul>
	Use Words <ul style="list-style-type: none"> <li>• "Stop!"</li> <li>• "I don't like that!"</li> <li>• "It's my turn to be the good guy."</li> </ul>	

### Common Approaches in Early Childhood Research

Early childhood education research can be classified as either quantitative or qualitative in nature. Ragin (2013) characterizes most quantitative analytic techniques as *variable-oriented* approaches. He suggests that the aim of this type of research is to (a) study a small number of independent variables across a large number of cases, and (b) attempt to identify a close set of causal variables that explain as much variation as possible in the dependent variable. This is accomplished by constructing a generic representation of relationships between focal variables based on patterns observed across many cases.

Traditional variable-oriented approaches, often used in early childhood education research, reflect an additive-linear view of causation that depends upon strong homogenizing assumptions about cases that, in turn, make these approaches insensitive to causal complexity (Hart, Hart & Miethe, 2013). For example, Bandura, Ross, and Ross (1961, 1963) studied children's acquisition of social skills through imitation (i.e., the *Bobo doll experiments*). Using correlational analysis, Bandura et al. (1961, 1963) measured the linear relationship between children's aggressive behavior in relation to their exposure to the following: observing modeled aggression by an adult, viewing a film with an adult exhibiting aggressive behavior, and viewing a film with a cartoon character exhibiting aggressive behavior. Results are differentiated between genders and among imitative responses (e.g., physical, verbal, nonaggressive), partial imitations (e.g., use of mallet, sits on Bobo doll), and non-imitative aggression (e.g., punches Bobo doll, physical and verbal, and gun play). Although results of the Bobo doll experiments identify the isolated effects of each independent variable (e.g., gender, imitative

responses) on perceptions, they imply that the effect on gender (or any other predictor of perceptions shown to be a significant correlate) do not vary across context. That is, that the effect of the correlates are contextually invariant.

Unlike variable-oriented approaches the goal of qualitative or *case-oriented* approaches used in early childhood research is to (a) examine many aspects of an individual case or relatively few cases, and (b) attempt to construct a representation of each individual from the interrelated aspects of each case (Ragin, 2013). Two well-known examples of case studies in early childhood education research involve Curtiss's (1977) study of Genie—a child who was isolated from human companionship for most of her early childhood—and Itard's (1962) study of the wild boy of Aveyron, a French child who lived most of his life in the woods. Although case studies like these capture very robust and detailed information about human behavior, their focus is usually limited to an individual or single case (Salkind, 2012). These types of case-oriented approaches view cases as combinations of aspects and conditions and attempt to understand them at a very specific level (Hart et al., 2013). Perhaps more importantly, in contrast to variable-oriented approaches, case-oriented techniques view causation as a set of combinations or “conjunctural” and plural (Ragin, 2013). Causal conditions are, therefore, believed to sometimes combine in different and contradictory ways to generate the same outcome (Hart et al., 2013).

A considerable body of empirical literature has been produced from both quantitative research on playful aggressive behavior [e.g., Hellendoorn and Harinck (1997); Pellegrini (1989a); Pellis and Pellis (2007); Smith and Lewis (1985); Smith et al., (2004); and Watson and Peng (1992)] as well as the qualitative literature [e.g., Piaget

(1951); Roopnarine & Johnson (2000)]. However, our knowledge and understanding of the *situational context* of playful aggression is limited, especially in the area of perception formation. Through the application of conjunctive analysis of case configurations, a data analytic technique that bridges the gap between variable-oriented and case-oriented methodologies (Miethe, Hart & Regoeczi, 2008) that yields a richer understanding of how attitudes about playful aggression are formed can be achieved.

### Conjunctive Analysis of Case Configurations

In 2008, Miethe and colleagues developed a new analytic approach for exploring nominal- or ordinal-level crime data that they describe as conjunctive analysis of case configurations. Similar to qualitative comparative analysis (QCA) methods developed by Ragin (1987), conjunctive analysis of case configuration can be summarized in three steps: 1) constructing a “truth table”, 2) visually inspecting the situational profiles contained in the truth table; and 3) assessing patterns of situational clustering among profiles and the relative influence of contextual factors that are contained therein.

#### Constructing a “Truth Table”

The first step of conjunctive analysis involves the construction of a “truth table” or data matrix from a quantitative set of data (Miethe et al., 2008). In SPSS, for example, this is accomplished through the use of a simple aggregate command:

```
AGGREGATE  
/OUTFILE = 'cdmatrix_file'  
/BREAK = X1 X2 X3  
/Y_mean = MEAN(Y)  
/N_Cases = N.
```

When the above syntax is run against a dataset, the multiple observations it contains will be aggregated into a single data matrix named “cdmatrix\_file.”

The `cdmatrix_file` that is created will have five columns. The first three columns correspond to each of the three independent variables that are identified in the syntax statement (e.g., the effect of age [ $X_1$ ], supervision [ $X_2$ ], and weapon [ $X_3$ ]) and that are believed to have an effect on the likelihood of observing the outcome variable. Values associated with the independent variables are assigned a value of ‘1’ when the variable is observed and a ‘0’ when it is absent from a given case configuration. The fourth column of the matrix represents the average value associated with the dependent or outcome variable [e.g., the average perception score or  $MEAN(Y)$ ] for all unique combinations of the three focal variables (i.e., each row). The final column represents the frequency of observed combinations of the focal variables ( $N\_Cases$ ). An additional column (i.e., column six) is often added to a matrix to allow for referencing the case configurations more easily. When done so, the values contained in this column reflect a unique ID#, which is associated with each unique combination of the three focal variables that are observed in the data.

### Visual Inspection of the Situational Profiles

The next step in conjunctive analysis involves visual inspection of the situational profiles contained in the truth table/data matrix. Table 4 illustrates a data matrix constructed using a hypothetical set of independent variables [ $X_1, X_2, X_3, \dots, X_j$ ] that are believed to influence the outcome of a bivariate dependent variable [ $Y$ ].

### Assessing Patterns of Situational Clustering

Simple visual inspections of the matrix like the one produced in Table 4 can yield answers to many important questions. For example, by examining the relative frequency of unique combinations of cases (i.e., ranking the column “ $N\_Cases$ ” from high-to-low)

the presence or absence of situational clustering can be assessed (i.e., are perceptions of aggressive play behavior contextually dependent). Relatedly, low-frequency configurations that may be unimportant (e.g., noise) with respect to the contexts that provide necessary and/or sufficient conditions that give rise to a particular outcome can also be easily identified. Finally, the causal importance of particular independent variables can be identified through paired comparisons. That is, configurations can be paired based on combinations of factors that are identical with the exception of a single predictor variable, and the average outcome value associated with both configurations can be compared in order to identify the relative importance of the single factor that differs across the paired case configurations.

Table 4

*Hypothetical Data Matrix Used in Conjunctive Analysis*

Configuration or ID#	X <sub>1</sub>	X <sub>2</sub>	X <sub>3</sub>	X <sub>j</sub>	N	Cases	Y
1	0	0	0	...	nc1	y1/nc1	
2	0	0	1	...	nc2	y2/nc2	
3	0	1	0	...	nc3	y3/nc3	
4	0	1	1	...	nc4	y4/nc4	
5	1	0	0	...	nc5	y5/nc5	
6	1	0	1	...	nc6	y6/nc6	
7	1	1	0	...	nc7	y7/nc7	
8	1	1	1	...	nc8	y8/nc8	
.	.	.	.	...	.	.	
.	.	.	.	...	.	.	
.	.	.	.	...	.	.	
.	.	.	.	...	.	.	
ci					nci	y1/nci	

Table adapted from Miethe et al. (2008).



Although no known research in early childhood education has used conjunctive analysis of case configurations, there is a growing body of scholarship in other academic disciplines. Collectively, these studies demonstrate the utility of conjunctive analysis and most of this research has emerged from the field of criminology. Studies that use conjunctive analysis in an effort to better understand reporting crime to police, college student victimization, and school bullying are useful examples.

#### Reporting Crime Among Hispanic Victims

Table 5 is a portion of the conjunctive analysis data matrix produced by Rennison (2010) that she used to analyze reporting patterns of violence experienced by Hispanic crime victims. Distinct situational contexts contained in the matrix were examined in terms of their relative prevalence and patterns of situational clustering among specific variables that predicted the likelihood that a Hispanic victim of violence would report an incident to police. Her research advanced existing knowledge about reporting patterns among Hispanic victims by identifying a small number of profiles that accounted for the highest probabilities of reporting.

Table 5

*Hispanic Violent Victimization: Situational Context and Percentage Reported to Police*

Situational Context	Victim's Gender	Victims' Marital Status	Weapon Presence	Injury	Victim & Offender Relationship	Type of Violence	Reported to Police	<i>N</i>
1	Female	Married	Firearm	No	Stranger	Robbery	94%	16
2	Female	Married	Firearm	No	Stranger	AA	82%	17
3	Female	Never married	Firearm	No	Stranger	AA	77%	22
4	Female	Married	Other	No	Stranger	AA	75%	28
5	Female	Never married	Firearm	Minor	Friend	AA	75%	16
6	Female	Separated	None	No	Intimate	SA	75%	32
7	Female	Married	Knife	Minor	Stranger	AA	73%	11
8	Female	Divorced	None	Minor	Intimate	SA	73%	15
9	Female	Never married	None	Minor	Intimate	SA	72%	46
10	Male	Married	None	Minor	Stranger	SA	70%	23

Note: This table only reflects the top 10 profiles reported by Rennison (2010). For the "Type of Violence" column, "AA" denotes "aggravated assault" and "SA" denotes "simple assault."

Two other recent investigations, one involving college students and the other middle school students, have shown how conjunctive analysis can be used to make meaningful contributions to existing primary/tertiary education and criminology scholarship.

#### College Student Victimization

Using data collect during the National Crime Victimization Survey (NCVS), Hart and Miethe (2011) examined the situational contexts associated with violence against college students. Findings from a conjunctive analysis of case configurations (see Table 6) suggest that violence against college students occurs in a diverse, yet concentrated pattern of situational contexts: minor assaults against males that occur off-campus and in front of bystanders being the most common violence experienced.

Table 6

*Situational Contexts for Student Violence, Ranked by Probability of On-Campus Occurrence*

Factors related to the...											
ID	Offense			Victim			Offender		<i>p</i>	<i>n</i>	Relative <i>p</i>
	sexoff	night	xbystand	vinjured	vmale	known	used drug	omale			
80	No	No	No	No	Yes	No	Yes	Yes	0.40	5	High
82	No	No	Yes	No	Yes	No	No	No	0.40	5	High
66	No	No	Yes	Yes	Yes	Yes	No	Yes	0.38	8	High
63	No	Yes	No	No	No	No	Yes	Yes	0.29	7	High
13	No	No	Yes	No	Yes	Yes	No	Yes	0.26	38	High
...											
61	No	No	No	No	No	No	Yes	Yes	0.00	5	Never
62	No	Yes	No	No	No	No	No	No	0.00	5	Never
64	Yes	Yes	Yes	No	No	Yes	No	Yes	0.00	5	Never
65	No	No	Yes	Yes	No	No	No	Yes	0.00	5	Never
68	No	Yes	Yes	Yes	No	Yes	No	No	0.00	5	Never

Note: The table only reflects part of Hart and Miethe's (2011) data matrix. The top half of the table shows the top five situational contexts for violence against college students, ranked by the likelihood of being victimized while on campus. The bottom half shows five situational contexts associated with the contexts least likely to result in violence against students who are on campus. Note that the bottom five profiles identify situations where violence never occurs.

Results also indicate that most incidents of campus violence share similar situational contexts to off-campus incidents. The results of this study offered empirical evidence that challenged some of the existing knowledge about the context of college student victimization and contributed to a new understanding of this important issue.

### School Bullying

Studying middle-school children using a conjunctive analysis of case configurations, Hart, Hart, and Miethe (2013) argued, “incidents of school bullying victimization are highly contextual, with few relevant factors demonstrating a constant ‘main effect’ across situational profiles” (p. 43). The significance of these findings was that they challenged long-standing ideas about the context of student bullying based on traditional, variable-oriented approaches by demonstrating the importance of understanding the situational contexts of these events (see Table 7).

In short, findings from Hart et al. (2013) suggest that traditional main effect models are unable to account for the contextual diversity of bullying victimization. Furthermore, they are unable to quantify the contextual effect of established factors believed to be causally related to school bullying victimization (Hart et al., 2013).

Table 7

*Situational Factors and the Likelihood that Bullying Victimization Occurred (n=16,244)*

ID	Gender	Grade	Race	External	Internal	Academics	Climate	Safe	Peer	Mean	N
1	Female	High	White	Yes	No	No	Yes	Yes	Yes	1.00	10
2	Male	Middle	White	Yes	Yes	No	Yes	Yes	Yes	0.94	16
3	Female	Middle	White	No	Yes	Yes	No	Yes	Yes	0.93	14
4	Male	High	White	Yes	No	No	No	Yes	No	0.91	11
5	Male	Middle	White	Yes	No	Yes	No	Yes	Yes	0.86	21
6	Female	High	White	Yes	No	No	No	Yes	No	0.82	11
7	Male	Middle	White	Yes	No	No	Yes	No	Yes	0.80	10
8	Female	High	White	No	Yes	No	No	Yes	Yes	0.80	10
9	Female	Middle	White	Yes	No	Yes	Yes	Yes	Yes	0.79	14
10	Female	High	White	No	Yes	Yes	No	Yes	Yes	0.78	41
...											
147	Male	High	White	No	No	No	Yes	Yes	No	0.12	335
148	Female	Middle	Non-white	No	No	Yes	Yes	No	No	0.12	17
149	Male	High	White	No	No	Yes	Yes	Yes	No	0.12	525
150	Female	High	White	No	No	No	Yes	No	No	0.11	18
151	Male	Middle	Non-white	No	No	Yes	Yes	No	Yes	0.11	56
152	Male	High	White	No	No	Yes	Yes	No	No	0.10	61
153	Male	High	White	No	No	No	Yes	No	No	0.90	34
154	Male	High	Non-white	No	No	Yes	Yes	Yes	No	0.90	160
155	Female	High	Non-white	No	No	Yes	Yes	No	No	0.70	14
156	Male	High	Non-white	No	No	Yes	Yes	No	No	0.70	15

Note: The table only reflects Part of Hart et al.'s (2013) truth table showing the situational contexts of the 10 profiles associated with the highest likelihood of bullying victimization (ID#s 1-10) and the 10 profiles associated with the lowest likelihood of bullying victimization (ID#s 147-156). For the "Grade" column, "High" denotes "High School."

In addition to using a relatively new analytic approach to data analysis, the proposed study will employ a rarely used—though scientifically accepted—approach to data collection.

### Video Vignettes

The proposed research will use video vignettes imbedded in an online survey tool to collect information about perceptions of aggressive play behavior (see Chapter 3). Vignette experiments, also referred to as stated choice studies, are used in social and behavioral science research to study decision making and to understand the basis for judgments on complex issues (Caro et al., 2004).

Vignette methods are commonly used when it is neither feasible nor practical to observe the behavior being studied (Caro, et al., 2004). For example, Hughes and Huby (2002) applied video vignettes in social and nursing research in order to better understand attitudes, perceptions, and beliefs regarding health care. Their data collection approach offered a quick and cost-effective methodology for reaching participants. More importantly, they argued that data quality was improved by reducing external influences of socially desirable responses. Hughes and Huby (2002) concluded that vignettes could not completely capture reality, but they offered both a practical and ethical alternative to other data collection techniques.

More specifically to the field of early childhood, Smith and Lewis (1985) implemented video playback as a means to obtain adults' and children's perceptions of real fighting and play fighting. Each adult and child participant viewed a total of 20 thirty-second episodes (16 playfully aggressive and 4 seriously aggressive) and was asked if the incident was *playful* or *really* fighting along with follow-up questions.

Results of the video playback showed significant agreement between adults' and children's responses regarding discriminatory criteria indicating playful or serious aggression.

Pellegrini (1989a) also used video playback methodology to investigate the meaning of R&T play for rejected and popular children. Similar to Smith and Lewis (1985), 10 episodes of elementary children either exhibiting playful or aggressive behavior was viewed by children; including those who appear in the videos. Participants were asked if the viewed behavior was *play fighting* or *real fighting*. Results of this study demonstrate a significant difference in the perceptions of playful and serious aggression between rejected and popular children.

Similarly, Smith et al. (2004) used video playback with three- to five-year-old children to gain an understanding of young children's perceptions of play fighting and real fighting. After being edited the videos displayed four or five episodes of boys participating in either playful or serious fighting on the school playground. Perceptions of the behavior seen in the videos and answers to a series of questions including "Is it play fighting or real fighting?" were recorded. Results indicate that participants who viewed themselves in the video have a greater understanding of the nature and motivation of play fighting and real fighting than viewers who do not appear in the videos (Smith et al., 2004).

#### Constant Variable Value Vignettes (CVVV)

Caro et al. (2004) describe two types of survey stated choice methods. The first type, Constant Variable Value Vignettes (CVVV), is a type of vignette technique used in science where all research participants respond to identical vignette content. Therefore, if



this technique were to be used in the proposed study, it would be more challenging to determine the affects of context on perceptions of aggressive play behavior because participants would be viewing a single play scenario. Although the CVVV approach is easier to design and implement than Contrastive Vignette Techniques (CVT), CVTs offer greater analytic possibilities according to Caro et al. (2004).

#### Contrastive Vignette Techniques (CVT)

As an alternative to CVVV methods, CVT use vignettes that are structured so that stories contained within them systematically vary. In doing so, study participants are asked to respond to slightly altered vignette content so that the influence of those variables can be quantified. The proposed study will utilize a contrastive approach.

#### Literature Review Summary

Because playful aggression is viewed in varying degrees of “playfulness” the debate remains as to when aggressive play behavior becomes serious fighting (Pellis & Pellis, 2007). Varying perceptions of playful aggression are evident throughout current literature (Little, et al., 2011; Logue & Detour, 2011; Logue & Harvey, 2010; Sandseter, 2007; Tannock, 2008). Research supports aggressive play as beneficial to child development (Bauer & Dettore, 1997; Calabrese, 2011; Clements, 2004; Freeman & Brown, 2004; Logue & Detour 2011; Parsons & Howe, 2006; Pellegrini, 1989a, 1989b; Reed, et al., 2000; Sandseter, 2011); yet, playful aggression is generally considered unsafe behavior (Little et al, 2011; Reed et al., 2000). Furthermore, school policy makers and teachers typically prohibit playful aggression in educational settings because of perceptions that it is unsafe (Bauer & Dettore, 1997; Freeman & Brown, 2004; Logue &

Harvey, 2010; Reed et al., 2000), perceptions that such risky behavior may cause injury (Little et al., 2001; Sandseter, 2007, 2009) perceptions that the behavior is seriously aggressive or violent (Dunn & Hughes, 2001; Logue & Harvey, 2010; Parsons & Howe, 2006), and perceptions that it leads to real fighting (Reed et al., 2000). Because adults lack the ability to distinguish between playful aggression and serious aggression the conventional view is that all aggression should be suppressed (Freeman & Brown, 2004). However, a recent study found fathers who engage in R&T play recognize it as important to their child's development and view the associated risk as something children need to learn in order to become competent as an adult (Fletcher et al., 2011).

Current literature supports similarities between components of various types of playful aggression. Each play type—risky play, active and imaginative play, play fighting, war play, big body play, gun play, superhero play, R&T play, violent pretend play, and play fighting—is further described as behavior that may cause injury and is tolerated by adults at varying degrees. Although literature supports benefits of such play, researchers also demonstrate adults' intolerance and negative perceptions of the play (Bauer & Dettore, 1997; Hellendoorn & Harinck, 1997; Little, et al., 2011; Logue & Detour, 2011; Logue & Harvey, 2010; Sandseter, 2007; Tannock 2008), particularly by females (Reed et al., 2000). Furthermore, adults and children acknowledge that playful aggression remains prevalent in educational environments despite efforts to prevent aggressive play behavior (Logue & Dettore, 2011; Tannock, 2008).

Finally, existing knowledge about aggressive play is based on quantitative and qualitative research. Conjunctive analysis of case configurations (Miethe et al., 2008) offers a promising alternative to traditional analytic approaches. It has been used in other

academic fields—especially in criminology—to enhance existing knowledge. To date, no known study within early childhood education has used conjunctive analysis. Therefore, the proposed study will use conjunctive analysis to advance our understanding of the situational contexts that could affect perceptions of aggressive play behavior.

## CHAPTER 3

### METHODOLOGY

The current study addresses the limited scholarship regarding how contextual factors associated with playful aggression affect adults' perceptions. Specifically, it was unknown how certain *combinations* of situational factors associated with playful aggression affected attitudes about this behavior. Using video vignettes imbedded in an online survey questionnaire combined with conjunctive analysis of case configurations, the current research explored the following research questions:

1. Are perceptions of playful aggression “situationally invariant” or do attitudes about playful aggression vary by specific combinations of contextual factors such as a child’s age, whether an adult is present supervising the play, and the presence/type of weapon children play with, which define the situational context of aggressive play?
2. Do the contextual factors (i.e., children’s age, supervision, weapon presence/type) that are believed to affect perceptions of aggressive play demonstrate “main effects” on perceptions or does the influence that factors have on perceptions vary across situational profiles?
3. Do situational profiles that define the context of playful aggression that is most likely to be viewed as “playful” differ significantly for parents versus non-parents and for teachers versus administrators?

## Subjects

Eligible participants in the current study were identified through convenience sampling (Salkind, 2012) and included administrators, teachers, and teacher assistants employed at the time of the survey at 12 preschools in Clark County, Nevada.

Convenience sampling was used for several reasons: (a) the researcher's professional affiliations with preschool administrators, (b) the proximity of the preschools to UNLV, (c) the ability to collect data in a timely manner (Salkind, 2012), and (d) affordability (Marshall & Rossman, 2011).

In order to be included in the study, potential respondents had to be aged 18 years or older and provide informed consent. Of the 108 eligible participants, data were collected from 41 individuals who provided informed consent (i.e., a 38% response rate). Each voluntary participant observed and provided feedback on 12 video vignettes, which yielded a total of 492 observations ( $41 \times 12 = 492$ ). Unique contextual profiles that were associated with each video vignette (using the CVT method) were defined by three independent variables that were manipulated: (a) the age of the children engaged in aggressive play (two categories), (b) whether/type of supervision (three categories), and (c) whether/type of weapon used in the scenario (six categories) (see Design and Procedures section). The contextual profile served as the unit of analysis for the current study.

## Data Collection Instrument

The questionnaire that was used was administered through Qualtrics, an online survey platform provided free of charge by UNLV. Based on the recommendations of

Caro et al. (2004), numerous considerations were taken into account during the selection of the software used to administer the survey including its (a) ability to work within various browsers (and versions) and that the survey content could be played with minimal additional installations or add-ons, (b) suitability for eligible respondents, survey modifications and editing options; and (c) ability to support concurrent users.

Although other platforms were considered, the core design of Qualtrics met the aforementioned criteria and most importantly, it supported the use of video. Qualtrics also allowed for a systematic format and randomization of content that helped address the issue of bias that could have arisen from question-order effects (Benton & Daly, 1991; Narayan & Krosnick, 1996). Finally, participants were able to use Qualtrics to complete a survey in a variety of locations enabling them to complete questionnaires when it was most convenient to them, thereby maximized the response rate.

### Measures of Variables

Eligible participants were asked to complete an online questionnaire after watching a series of video vignettes. Perceptions of the observed behaviors depicted in each video were recorded. Vignettes contained in the survey depicted children engaged in physical outdoor play within a natural environment. A description of the independent variables, control variables, and the measure of perceptions follow.

### Independent Variables

As noted previously, eligible participants were asked to view a total of 12 videos, each lasting approximately 15 seconds. Within each video, three independent variables

related to the context of the play behavior were manipulated. These variables also corresponded to factors that could have affected perceptions of playful aggression.

Consideration of these variables was based on current research and include (a) whether the age of the children at play in the scene were the same (0=No and 1=Yes), (b) whether the play was supervised (0=No; 1=Yes, by a male adult; and 2=Yes, by a female adult), and (c) whether/type of toy weapon used during play (0=R&T no weapon; 1=Blasters/Noise maker guns; 2=Light sabers; 3=Wizard wands; 4=Nerf<sup>®</sup>/Projectile dart guns; and 5=Nerf<sup>®</sup> Foam swords and shields). When these contextual factors were combined, they created a total of 36 unique videos (2 x 3 x 6=36). Table 8 outlines the contextual factors manipulated in each video.

#### Control Variables

Given the effects of certain demographic characteristics that could have influenced perceptions of playful aggression, the current study controlled for a participant's gender (0=Male or 1=Female), race/ethnicity (0=White, non-Hispanic; 1=Black, non-Hispanic; 2=Other, non-Hispanic; or 3=Hispanic, any race), educational level (0=Not, attended/completed college or 1=Attended/completed college), parental status (0=Not, a parent or 1=Parent), and whether they were currently (0) a director / administrator or administrative staff or (1) an assistant teacher / lead teacher.

#### Dependent Variable

After each video the dependent variable—perception—was measured. Specifically, a respondent was asked to rate the behavior observed in each video after it was viewed. Scores were recorded on a seven-point semantic differential scale that ranged from (1) “play” to (7) “violent”.

Table 8

*The 36 Unique Combinations of Contextual Factors Manipulated in Each Video*

Video No.	Age	Supervision	Weapon
1	Similar	None	R&T
2	Similar	None	Blaster guns
3	Similar	None	Light sabers
4	Similar	None	Wizard wands
5	Similar	None	Nerf <sup>®</sup> dart guns
6	Similar	None	Foam swords
7	Similar	Female	R&T
8	Similar	Female	Blaster guns
9	Similar	Female	Light sabers
10	Similar	Female	Wizard wands
11	Similar	Female	Nerf <sup>®</sup> dart guns
12	Similar	Female	Foam swords
13	Similar	Male	R&T
14	Similar	Male	Blaster guns
15	Similar	Male	Light sabers
16	Similar	Male	Wizard wands
17	Similar	Male	Nerf <sup>®</sup> dart guns
18	Similar	Male	Foam swords
19	Different	None	R&T
20	Different	None	Blaster guns
21	Different	None	Light sabers
22	Different	None	Wizard wands
23	Different	None	Nerf <sup>®</sup> dart guns
24	Different	None	Foam swords
25	Different	Female	R&T
26	Different	Female	Blaster guns
27	Different	Female	Light sabers
28	Different	Female	Wizard wands
29	Different	Female	Nerf <sup>®</sup> dart guns
30	Different	Female	Foam swords
31	Different	Male	R&T
32	Different	Male	Blaster guns
33	Different	Male	Light sabers
34	Different	Male	Wizard wands
35	Different	Male	Nerf <sup>®</sup> dart guns
36	Different	Male	Foam swords



## Design and Procedures

The research design used for this study consisted of three phases: (a) a pre-study phase (i.e., Phase 1), (b) a participant recruitment and data collection phase (i.e., Phase 2), and (c) a data analysis phase (i.e., Phase 3).

### Pre-Study

Phase 1 of this study, the pre-study phase, involved creating the video vignettes. The vignettes depicted children engaged in aggressive play within a natural environment. A total of 36 videos were created (see Table 8), one corresponding to each unique contextual profile that was analyzed in Phase 3. For example, Figures 1a-c are images that were seen when a respondent viewed Video No. 19 (i.e., different aged boys who were unsupervised and engaged in rough and tumble play), Video No. 2 (i.e., similar aged boys who were unsupervised and playing with blaster guns), and Video No. 21 (i.e., different aged boys who were unsupervised and who were playing with light sabers), respectively.

As noted previously, due to how verbal communication among the children varied across videos (e.g., in some instances children said, “kill”, “shoot”, or “stop” but not in others) the audio for each vignette was removed. The children who were used to create the videos were not participants in this study (i.e., data were not collected from them). Therefore, according to UNLV’s Office of Research Integrity Senior Human Research Compliance Administrator, Ms. Cindy Lee-Tataseo, a full ethical review of the current research proposal was not necessary.



*Figure 1.* Images from videos that were shown to participants in order to gauge perceptions of aggressive play behavior. From left-to-right, the images depict two boys who are unsupervised and (a) engaged in rough and tumble play, (b) playing with toy blasters and (c) playing with light sabers.

### Participant Recruitment and Data Collection

Phase 2 of the proposed research involved participant recruitment and data collection in accordance with IRB Protocol #1407-4871M (see Appendix 1). Because the survey was administered online, the first step of Phase 2 involved recruiting participants. To that end, email addresses of eligible participants were obtained from the UNLV/CSUN Preschool ( $n=15$ ) and Acelero Learning Clark County Head Start ( $n=93$ ). Both the UNLV Preschool and the Head Start programs provide care for 3- to 5-year-old children.

The second step of this phase involved emailing eligible respondents invitations to participate in this study. A copy of the invitation email is provided in Appendix 2. Eligible participants who clicked on the link embedded in the email were brought to the survey website hosted by Qualtrics. Before beginning the survey, eligible participants were presented with the informed consent information. This information was presented as a webpage and was also made available for download as a PDF file. A copy of the informed consent form is provided in Appendix 3.

Because of the survey's format (i.e., online), obtaining original signatures on the informed consent form was not possible. Instead, consent was obtained when eligible participants clicked a button that read, "I Want to Participate," located at the bottom of the informed consent page. If eligible participants chose not to participate in the study they clicked a button that read, "I Do NOT Want to Participate." Clicking this button removed them from the survey website automatically.

The final step of Phase 2 involved collecting data from consenting participants. The final sample consisted of 41 participants who represented 38% of eligible subjects that were asked to complete a questionnaire.

Table 9 contains descriptive statistics for participants and shows that the typical respondent was a 33-year-old white, non-Hispanic female who was pursuing/had completed an undergraduate college degree. Approximately one-third of the sample was comprised of school/center directors, administrators, or administrative staff; and about two-thirds of the sample consisted of respondents who are parents.

Table 9

*Demographic Characteristics of Survey Participants (n=41)*

Characteristic	<i>n</i>	%	Min	Max	<i>M</i>	<i>SD</i>
Gender						
Female	41	100.0				
Male	0	0.0				
Race / ethnic						
White, non-Hispanic	18	43.9				
Black, non-Hispanic	10	24.4				
Other, non-Hispanic	7	17.1				
Hispanic, any race	6	14.6				
Age			23	61	33.0	4.9
Marital status						
Never married	16	39.0				
Divorced / separated	6	14.6				
Currently married	19	46.0				
Educator status						
Teacher	27	65.9				
Director / administrator / staff	14	34.1				
Educational level						
Graduate degree completed	9	22.0				
Pursuing / completed undergraduate degree	28	68.3				
Never attended / completed college	4	9.7				
Parental status						
Yes, a parent	26	65.4				
No, not a parent	15	36.6				

The final stage of the current study (i.e., Phase 3) involved data analysis beyond univariate analysis, results of which are presented in the next Chapter.

## CHAPTER 4

### RESULTS

The purpose of this study was to identify the specific combinations of contextual factors that affected adults' perceptions of observed playful aggression among 3- to 5-year-olds. This Chapter is organized according to the three research questions that guided this study. Following a restatement of each question the data analysis procedures that were used to address each question are presented along with the current findings.

#### Research Questions

The current study explored the following questions:

1. Are perceptions of playful aggression “situationally invariant” or do attitudes about playful aggression vary by specific combinations of contextual factors such as a child’s age, whether an adult is present supervising the play, and the presence/type of weapon children play with, which define the situational context of aggressive play?
2. Do the contextual factors (i.e., children’s age, supervision, weapon presence/type) that are believed to affect perceptions of aggressive play demonstrate “main effects” on perceptions or does the influence that factors have on perceptions vary across situational profiles?
3. Do situational profiles that define the context of playful aggression that is most likely to be viewed as “playful” differ significantly for parents versus non-parents and for teachers versus administrators?

Conjunctive analysis of case configurations (Miethe et al., 2008) was used as the primary data analysis technique (i.e., Phase 3 of the project) to answer each of the research questions. More specifically, conjunctive analysis was used to identify the dominant situational profiles—comprised of unique combinations of the predictor variables measured—that were believed to affect individuals’ attitudes regarding playful aggression (See Table 8).

#### Are Perceptions of Playful Aggression “Situationally Invariant?”

The first “truth table” produced from conjunctive analysis is presented in Table 10 and shows each of the 36 situational profiles depicted in the video vignettes that were viewed by participants. Case configurations that make up each profile are ranked by the mean (*M*) column of the table. For each contextual profile, the mean column represents *the proportion of participants that perceived the children’s actions that were depicted in a video as “playful behavior.”* As described in the previous Chapter original perception scores were recorded on a seven-point semantic differential scale that ranged from (1) “play” to (7) “violent.” In order to produce the truth table that appears in Table 10, however, the original scores were recoded into two categories. Perception scores of 1 through 3 were recoded into the category “playful” (1), whereas scores 5 through 7 were recoded into the category “not playful” (0).

Visual inspection of Table 10 reveals several interesting patterns. First, none of the video vignettes that were viewed by participants were *always* characterized as “playful” and none were *always* considered “not playful.” Instead, perceptions of play behavior among 3- to 5-year-old children vary greatly among the 36 profiles considered, depending on the particular context of the behavior. For example, 87 out of 100 times the



behavior was characterized as playful when it involved different aged children playing with Nerf® dart guns while being supervised by a woman (i.e., Video No. 29). On the other hand, when a video depicted different aged boys engaged in play with Nerf® foam swords and shields while unsupervised (i.e., Video No. 24) the behavior was characterized as playful only 27 out of 100 times.

Second, within the profiles considered by participants as most playful (i.e., the top nine profiles or upper quartile) there is considerable variation in perceptions of aggressive play behavior, based on the context. For example, among the upper quartile of situational contexts depicted in the video vignettes (see profiles listed in Table 10 that fall *above* those profiles shaded in grey) there was a 20 percentage-point difference in proportion of times a behavior was considered playful (i.e., the proportion ranged from 67% to 87%).

Third, a similar pattern of diversity was observed in the profiles considered least playful (i.e., the bottom nine situational contexts or the lower quartile). As with the upper quartile of case combinations, there is considerable contextual variation in the way the behavior was perceived (see profiles listed in Table 10 that fall *below* the profiles shaded in grey). Specifically, there was a 13 percentage-point difference in attitudes towards the least playful scenarios that were depicted in the videos.

In summary, findings presented in Table 10 show that there is considerable variation of attitudes towards aggressive play behavior among 3- to 5-year-olds; and that perceptions are highly influenced by context. This pattern was not only observed among all the profiles considered, but also among those contextual profiles most and least likely to be characterized by participants as playful (i.e., the upper and lower quartile of case configurations that were ranked by the average perception score).

Table 10

*Contextual Profiles of Aggressive Play Behavior, Ranked by Adults' Average Perception Rating*

Video No.	Age	Supervision	Weapon	<i>N</i>	<i>M</i>	<i>SD</i>
29	Different	Female	Nerf <sup>®</sup> dart guns	15	.87	.35
10	Similar	Female	Wizard wands	11	.82	.40
27	Different	Female	Light sabers	15	.80	.41
28	Different	Female	Wizard wands	12	.75	.45
4	Similar	None	Wizard wands	12	.75	.45
22	Different	None	Wizard wands	15	.73	.46
23	Different	None	Nerf <sup>®</sup> dart guns	16	.69	.48
19	Different	None	R&T	12	.67	.49
21	Different	None	Light sabers	12	.67	.49
15	Similar	Male	Light sabers	14	.64	.50
18	Similar	Male	Foam swords	19	.63	.50
14	Similar	Male	Blaster guns	15	.60	.51
33	Different	Male	Light sabers	15	.60	.51
5	Similar	None	Nerf <sup>®</sup> dart guns	10	.60	.52
32	Different	Male	Blaster guns	17	.59	.51
25	Different	Female	R&T	19	.58	.51
2	Similar	None	Blaster guns	19	.58	.51
26	Different	Female	Blaster guns	7	.57	.53
34	Different	Male	Wizard wands	11	.55	.52
7	Similar	Female	R&T	16	.50	.52
11	Similar	Female	Nerf <sup>®</sup> dart guns	8	.50	.53
13	Similar	Male	R&T	8	.50	.53
17	Similar	Male	Nerf <sup>®</sup> dart guns	14	.50	.52
30	Different	Female	Foam swords	16	.50	.52
35	Different	Male	Nerf <sup>®</sup> dart guns	13	.46	.52
9	Similar	Female	Light sabers	14	.43	.51
3	Similar	None	Light sabers	10	.40	.52
20	Different	None	Blaster guns	10	.40	.52
8	Similar	Female	Blaster guns	18	.39	.50
31	Different	Male	R&T	13	.38	.51
36	Different	Male	Foam swords	13	.38	.51
16	Similar	Male	Wizard wands	8	.38	.52
12	Similar	Female	Foam swords	21	.33	.48
1	Similar	None	R&T	16	.31	.48
6	Similar	None	Foam swords	13	.31	.48
24	Different	None	Foam swords	15	.27	.46

Note: Mean ranges from 0 (not playful behavior) to 1 (playful behavior). The shaded area represents the middle quartile of case configurations.

### Do Contextual Factors Demonstrate “Main Effects” on Perceptions?

Traditional analytic approaches used to explain causal relationships commonly involve prediction models (e.g., OLS, logistic regression, or HLM) that identify whether the change in value of an independent variable is correlated systematically to the change in value of a dependent variable (See Common Approaches in Early Childhood Research section in Chapter 2). These types of models often examine the paired associations between one independent variable and the dependent variable, while other predictor variables are held constant (Menard, 2002; Jaccard & Turrisi, 2003). When a non-random association is identified, independent variables that are not represented as interaction terms and that demonstrate a significant relationship with the dependent variable are said to have a “main effect” (Jaccard & Turrisi, 2003).

Table 11 contains results of a logistic regression model that predicted the likelihood a participant would rate behavior depicted in a video as “playful.” The regression model contained each of the three contextual factors considered in the conjunctive analysis of case configurations (i.e., age, supervision, and weapon/play type) and shows the main effects for each. Findings suggested that (a) overall, the model explained about 5% of the variation in participants’ attitudes towards aggressive play behavior, (b) the age of children engaged in aggressive play behavior did not have a significant effect on whether their actions would be viewed as “playful” versus “not playful,” (c) the type of supervision did not have a significant effect on perceptions, and (d) when children played with wands instead of without any weapons (i.e., rough and tumble play only) the behavior was significantly *more* likely to be viewed as “playful” versus “not playful” ( $b=0.72$ ;  $p=.03$ ). Although the model presented in Table 11 violates

certain assumptions of regression analysis (e.g., independent observations), it was intended to illustrate how traditional analyses often focuses on identifying the “main effects” of predictor variables at the expense of an in-depth understanding of contextual variability, which was one of the key justifications for using conjunctive analysis in the current study.

Table 11

*Results of a Logistic Regression Model Predicting Perceptions of Aggressive Play Behavior as "Playful"*

Variables	<i>b</i>	SE	Wald	Exp( <i>b</i> )	<i>p</i>
Children similar in age	-0.27	0.19	2.12	0.76	0.15
Supervisor's gender					
Female (excluded)					
Male	-0.17	0.23	0.55	0.85	0.46
Unsupervised	-0.19	0.23	0.71	0.83	0.40
Weapon / play type					
Rough and tumble (excluded)					
Blaster	--	0.31	--	1.00	1.00
Sword	-0.38	0.30	1.76	0.68	0.18
Light saber	0.36	0.31	1.42	1.49	0.23
Nerf dart gun	0.40	0.31	1.68	1.50	0.20
Wand	0.72	0.33	4.78	2.06	0.03
Constant	0.18	0.09	0.74	1.19	0.05
-2 Log-likelihood	661.20				
Nagelkerke <i>R</i> -squared	0.05				

-- &lt; .005

For example, findings presented in Table 11 suggested that type of supervision (i.e., female supervision, male supervision, or no supervision) did not have a significant effect on attitudes towards aggressive play behavior. However, a review of Table 10 shows that none of the *upper* quartile of case configurations involved aggressive play behavior that was supervised by a man, but one-third of cases in the *lower* quartile of configurations involved scenarios where a male adult was present. This suggests that under certain circumstances some types of supervision matters, but that the net effect of supervision (i.e., the “main effect”) is lost when traditional analytic approaches are used to analyze these data. Understanding this limitation of traditional approaches to data analysis, the current study’s second research question focused more closely on the presence or absence of specific components of the contextual profiles presented in Table 10 in order to determine which ones (if any) demonstrated a “main effect” on adults’ perceptions of aggressive play behavior among 3- to 5-year-olds.

In order to explore the main effects that age, supervision, and weapon presence/type had on attitudes a series of boxplots were generated for each focal variable. Specifically, boxplots were used as an exploratory data analysis technique to show the differences in proportions between matched pairs of case profiles, where the only characteristic of the profile that varied was a single attribute of one variable (Tukey, 1977). For example, video pairs Nos.1 and 19, 2 and 20, and 3 and 21 (see Table 10) are identical except for the age variable. For each of these profile pairs the first profile depicted children who were similar in age, whereas the second profile depicted children who were not. Differences in mean perception scores for all pairs of profiles matched on

the age variable and plotted as a boxplot illustrated the isolated effect that this focal variable had on perceptions of aggressive play behavior.

For example, Figure 2 is a boxplot of differences in mean perception scores for *age*, which revealed considerable variability in the effect that this aspect of the situational context had on adults' perceptions. In one context *different* aged children engaged in aggressive play *increased* the likelihood of it being perceived as playful by an average of 37%. In a different context, however, video vignettes with *different* aged children *decreased* the probability by an average of 25%. Overall, the average net effect of children's age on adults' perceptions was a 7% *increase* in the likelihood that the behavior would be characterized by participants as "playful," but the isolated effect that age had on perceptions of aggressive play behavior among 3- to 5-year olds varied, on average, by 62 percentage points (i.e., the distance between the ends of the "whiskers"). Because the effect of age neither consistently affected attitude in a positive nor negative way, current findings suggest that age does not have a main effect on adults' perceptions.

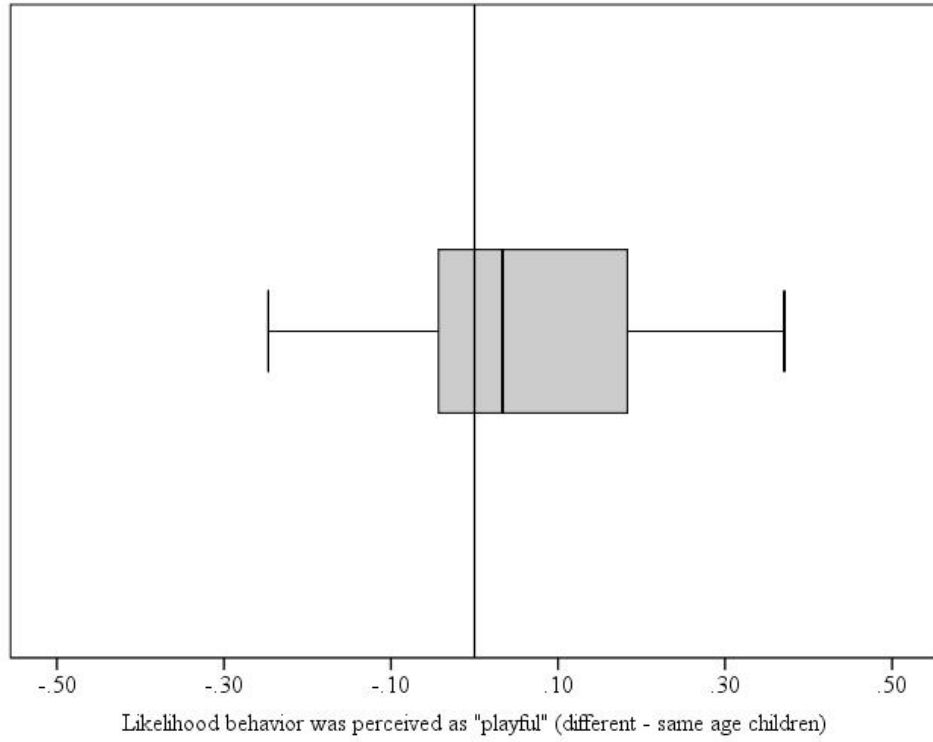


Figure 2. Contextual variability of group differences in main effects for the likelihood that participants characterized the aggressive play behavior as "playful" for matched pairs of profiles that differed only by the age variable.



Figure 3 contains three boxplots that were produced from differences in mean perception scores for each combination of attributes associated with *supervision* (i.e., female supervision, male supervision, and no supervision). As with the boxplot in Figure 2, boxplots presented in Figure 3 suggest that there was considerable contextual variability in terms of the effect that supervision had on perceptions of aggressive play behavior, which traditional analytic approaches could not identify (i.e., see Table 11).

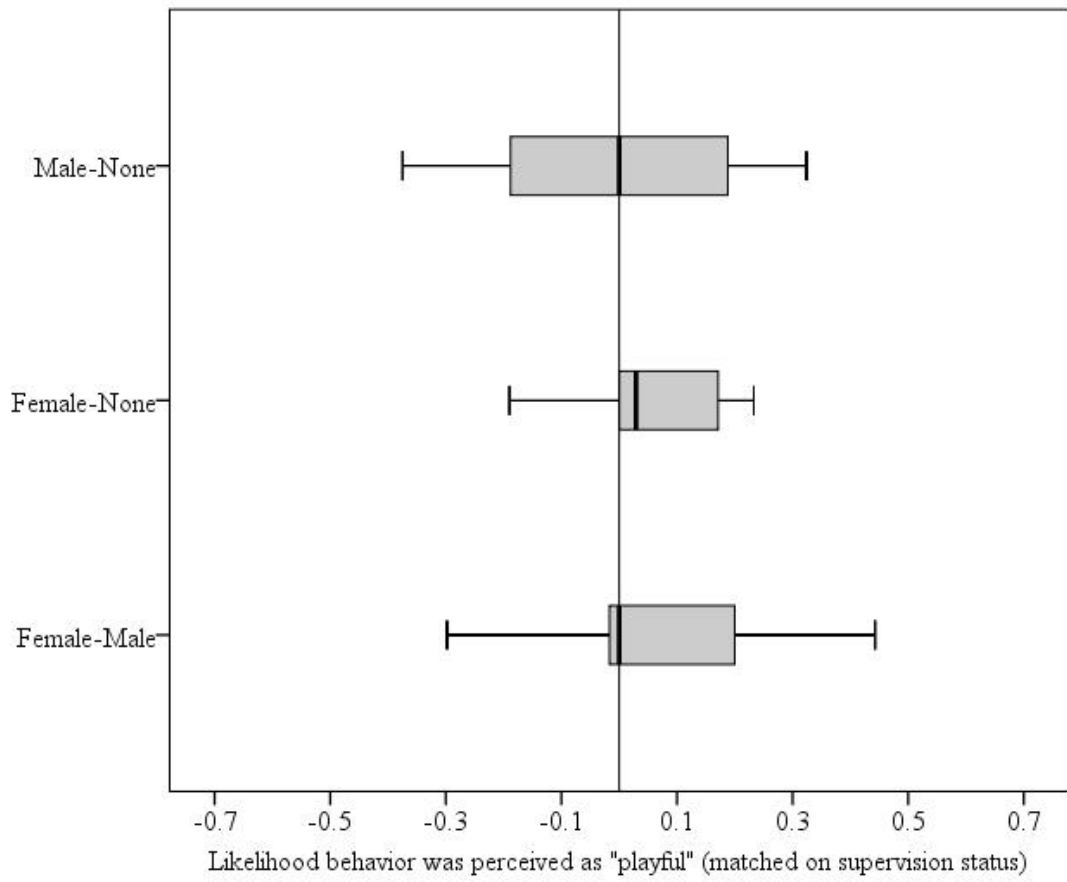


Figure 3. Contextual variability of group differences in main effects for the likelihood that participants characterized the aggressive play behavior as "playful" for matched pairs of profiles that differed only by supervision status.

For example, on average, when children were supervised by a male (instead of unsupervised) the likelihood that the aggressive play behavior was viewed as “playful” *increased* by as much as 32% (i.e., the far right end of the “Male-None” boxplot “whisker”). This finding contributes to early childhood scholarship because existing literature focuses on the importance of supervision (see, for example, Freeman & Brown, 2004; Hart & Tannock, 2013b), while the current research draws on the relationship between supervision and its positive effect on how playful aggression is viewed. However, under different contexts the effect of male supervision (as opposed to no supervision) adversely affected adults’ attitudes. On average, when similar aged children were playing with wizard wands and being supervised by a man (e.g., Video No. 16) adults were 37% *less* likely to rate the behavior as “playful” than when similar aged children were playing with wizard wands, but unsupervised (e.g., Video No. 4) (i.e., the far left end of the “Male-None” boxplot “whisker”).

Despite a 70 percentage point difference in perception scores, traditional analytic approaches are unable to “tease out” this contextual variability because they rely on “average effects” to determine “significant differences” (Menard, 2002). In this case, on average, there was only a 1% *decrease* in the likelihood that a scenario was viewed as “playful” when a man was supervising versus when no supervisor was present. This was illustrated in Figure 3 by how close the center of the first box plot was to the average difference in perception scores being zero.

When the average effect of female supervision was compared to no supervision (i.e., the second boxplot in Figure 3), the contextual variability was less severe. Nevertheless, a 42-percentage point difference in the likelihood that the aggressive play

behavior depicted in the videos would be characterized as “playful” was still observed. For example, when similar aged children were playing with blaster guns and being supervised by a woman (e.g., Video No. 8), on average, adults were 19% *less* likely to rate the behavior as “playful” than when similar aged children were playing with blaster guns, but were unsupervised (e.g., Video No. 2). On the other hand, the difference in average perceptions scores *increased* by 23% when a woman supervised playful aggression between different aged children playing with Nerf<sup>®</sup> foam swords and shields (i.e., Video No. 30) compared to the same scenario where the children were unsupervised (i.e., Video No. 36).

Again, despite the considerable variability in perception scores related to profiles matched on female supervision versus no supervision, on average, there was only a 6% *increase* in the likelihood that a participant viewed the aggressive play behavior as “playful” when a behavior was supervised by a woman versus not supervised at all. This “net effect” of only 6% explains why results from the regression model for “unsupervised” (using female supervision as a reference) were not significant (see Table 11).

The most dramatic contextual variation for the supervision variable was demonstrated when profiles involving a female supervisor were matched to identical profiles with a male supervisor (see the third boxplot presented in Figure 3). For example, the effect of female supervision (versus male supervision) resulted in an average *increase* of 44% in the likelihood the children’s behavior would be viewed as “playful” when it involved similar aged children playing with wizard wands (i.e., Videos No.10 versus No. 16). On the other hand, the average effect of female supervision produced a 30%

*decrease* when the context of play involved similar aged children playing with Nerf<sup>®</sup> foam swords and shields (Video No. 12 and No. 18). The “net effect” of female supervision compared to male supervision was a 7% *increase* in the likelihood that a participant would view the behavior as “playful.”

Regarding the effect of *weapon/play type*, results displayed in a series of boxplots offered in Figure 4 suggest a similar pattern to those observed for both the age and supervision variables. For example, results from the logistic regression model example presented in Table 11 indicate that when children played with wizard wands (compared to when they are engaged in rough and tumble play without weapons) there was a significant *increase* in the likelihood the aggressive play behavior would be viewed as “playful” ( $b=0.72$ ;  $p=.03$ ). This was clearly illustrated by the last boxplot presented in Figure 4 that shows nearly all the variation in the differences in matched profile scores fell above a mean difference of zero.

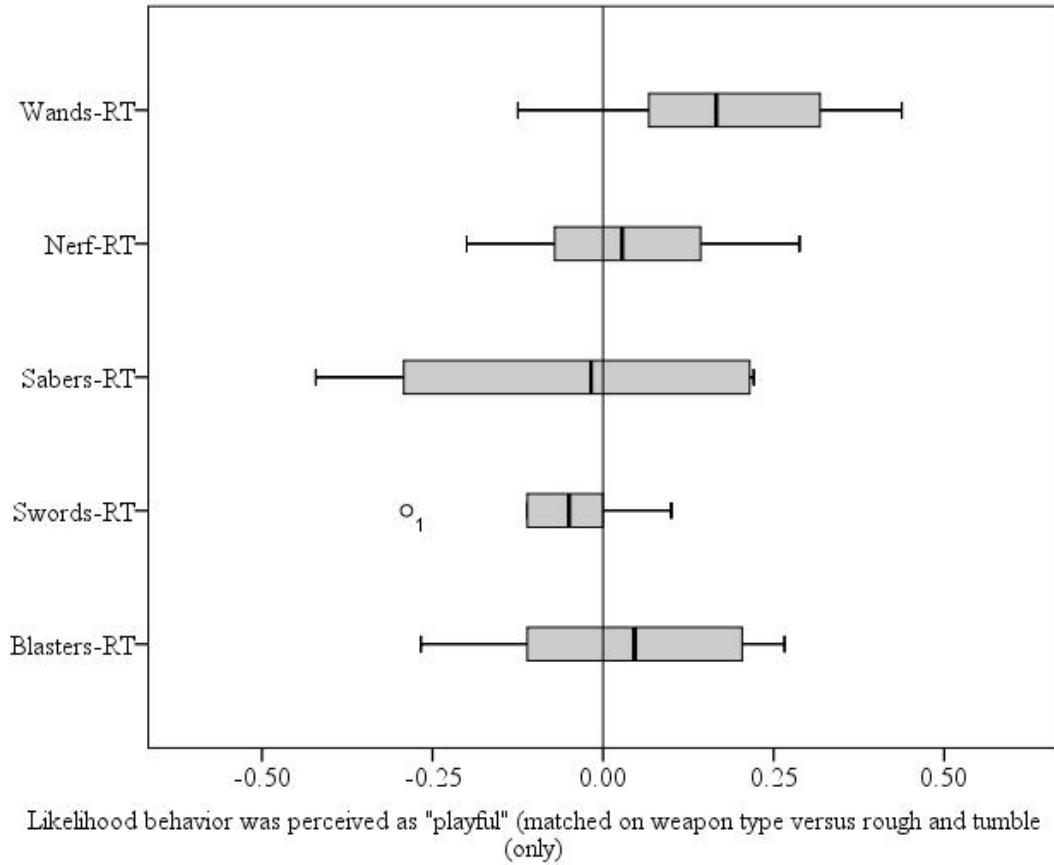


Figure 4. Contextual variability of group differences in main effects for the likelihood that participants characterized the aggressive play behavior as "playful" for matched pairs of profiles that differed only by weapon type (referenced only to rough and tumble play).

Conjunctive analysis is beneficial in this example because situations where participants' perceptions of aggressive play that included wizard wands were adversely affected could be identified. For example, on average, there was a 13 percentage point decrease in perceptions of children's behavior as "playful" when similar aged boys were supervised by a male while playing with wands than when they played without them (i.e., Video No. 16 versus No. 13) (i.e., the far left end of the "Wands-RT" boxplot "whisker").

In summary, boxplots presented in Figures 2-4 illustrated the isolated effects of focal variables considered in the current study. They revealed that none were consistently associated with increased/decreased perceptions of aggressive play behavior as "playful" or as "not playful." Instead of a "main effect," highly contextual effects were observed. Because none of the variables included in the current study demonstrated a main effect, these results suggest that traditional approaches to analyzing data (i.e., logistic regression) mask the important affects that context has on aggressive play behavior.

#### Do Perceptions Differ Between Parents/Non-Parents and Between Teachers/Administrators?

Group comparisons were made between parents and nonparent and between administrators and teachers in order to assess the third and final research question: Do situational profiles that define the context of playful aggression that is described as "playful" differ for parents and non-parents and for administrators and teachers?

Situational profiles viewed by participants who identified themselves as a parent were matched to identical profiles viewed by participants who indicated that they were not a parent. The same approach was taken for participants who indicated that they were a teacher versus an administrator. A sufficient number of observations ( $n \geq 5$ ) were

obtained for half the contextual profiles when the data were grouped by parental status. One-third of all profiles satisfied the minimum frequency rule (see Miethe et al., 2008; Hart, 2014) when the data were grouped among the teachers/administrators.

In order to assess group differences, rank-ordered pairs of mean perception scores for parents and non-parents as well as teachers and administrators were compared using Spearman's rank order correlation. Results are presented for parents and non-parents in Table 12 and show that the ranked-ordered profiles (based on the likelihood that aggressive play behavior was considered "playful") is uncorrelated ( $r_s=.318$ ;  $p=.198$ ). This means that when identical contextual scenarios are depicted in the videos, parents and non-parents view them differently.



Table 12

*Contextual Profiles of Aggressive Play Behavior, Ranked by Adults' Average Perceptions for Non-Parents and Parents*

Video No.	Age	Supervision	Weapon	Non-Parent			Parent		
				<i>n</i>	<i>M</i>	<i>SD</i>	<i>N</i>	<i>M</i>	<i>SD</i>
29	Different	Female	Nerf <sup>®</sup> dart guns	6	1.00	0.00	9	0.78	0.44
30	Different	Female	Foam swords	5	0.80	0.45	11	0.36	0.50
2	Similar	None	Blaster guns	7	0.71	0.49	12	0.50	0.52
7	Similar	Female	R&T	6	0.67	0.52	10	0.40	0.52
22	Different	None	Wizard wands	6	0.67	0.52	9	0.78	0.44
23	Different	None	Nerf <sup>®</sup> dart guns	11	0.64	0.50	5	0.80	0.45
32	Different	Male	Blaster guns	8	0.63	0.52	9	0.56	0.53
18	Similar	Male	Foam swords	8	0.63	0.52	11	0.64	0.50
9	Similar	Female	Light sabers	5	0.60	0.55	9	0.33	0.50
21	Different	None	Light sabers	5	0.60	0.55	7	0.71	0.49
33	Different	Male	Light sabers	5	0.60	0.55	10	0.60	0.52
25	Different	Female	R&T	9	0.56	0.53	10	0.60	0.52
15	Similar	Male	Light sabers	6	0.50	0.55	8	0.75	0.46
35	Different	Male	Nerf <sup>®</sup> dart guns	7	0.43	0.53	6	0.50	0.55
20	Different	None	Blaster guns	5	0.40	0.55	5	0.40	0.55
24	Different	None	Foam swords	5	0.40	0.55	10	0.20	0.42
12	Similar	Female	Foam swords	7	0.29	0.49	14	0.36	0.50
8	Similar	Female	Blaster guns	6	0.00	0.00	12	0.58	0.51

Note: Mean ranges from 0 (not playful behavior) to 1 (playful behavior).

Similar results were observed when administrators' attitudes about playful aggression were compared to teachers' perceptions. Table 13 shows the scores for situational profiles that were matched across both groups. The rank-order correlation between the two distributions was examined using Spearman's rho and results indicated that when the same aggressive play behavior was observed by administrators and by teachers there was a weak, non-significant correlation between perception scores ( $r_s = .493$ ;  $p = .073$ ). Collectively, these findings suggest that situational profiles that define the context of playful aggression were not only viewed differently by parents and non-parents, but were also viewed differently by teachers and administrators.

Table 13

*Contextual Profiles of Aggressive Play Behavior, Ranked by Adults' Average Perceptions for Administrators and Teachers*

Video No.	Age	Super- vision	Weapon	Administrators			Teachers		
				<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>
14	Similar	Male	Blaster guns	5	0.80	0.45	10	0.50	0.53
22	Different	None	Wizard wands	5	0.80	0.45	10	0.70	0.48
15	Similar	Male	Light sabers	8	0.75	0.46	6	0.50	0.55
27	Different	Female	Light sabers	6	0.67	0.52	9	0.89	0.33
18	Similar	Male	Foam swords	8	0.63	0.52	11	0.64	0.50
32	Different	Male	Blaster guns	8	0.63	0.52	9	0.56	0.53
2	Similar	None	Blaster guns	5	0.60	0.55	14	0.57	0.51
23	Different	None	Nerf <sup>®</sup> dart guns	5	0.60	0.55	11	0.73	0.47
12	Similar	Female	Foam swords	7	0.57	0.53	14	0.21	0.43
25	Different	Female	R&T	8	0.50	0.53	11	0.64	0.50
30	Different	Female	Foam swords	7	0.43	0.53	9	0.56	0.53
3	Similar	None	Light sabers	5	0.40	0.55	5	0.40	0.55
36	Different	Male	Foam swords	6	0.33	0.52	7	0.43	0.53
1	Similar	None	R&T	6	0.17	0.41	10	0.40	0.52

Note: Mean ranges from 0 (not playful behavior) to 1 (playful behavior).

## Summary of Findings

Using conjunctive analysis of case configurations (Miethe et al., 2008), the current study demonstrated that perceptions of playful aggression were “situationally dependent.” In other words, findings from the current study showed that adults’ attitudes about playful aggression vary by specific combinations of contextual factors. Factors considered in the current study included a child’s age, whether an adult was present supervising the play, and the presence/type of weapon children played with. When these factors were used to define the situational context of aggressive play and when adults viewed different forms of playful aggressive behavior in context, opinions about whether it was “playful” varied significantly. In the current study, perceptions of play behavior varied by 60 percentage points depending on the particular situational context (See Table 7).

The current findings also showed that the contextual factors considered (i.e., children’s age, supervision, weapon presence/type) and that are believed to affect perceptions of aggressive play do not have a consistent “main effect” on perceptions. On the contrary, current findings showed that the influences that these factors have on perceptions vary across situational profiles. These findings were compared to findings that would have been produced from the current data using more traditional analytic methods (i.e., logistic regression) in order to demonstrate some of the limitations of traditional methods in identifying contextual patterns as well as to show how conjunctive analysis could overcome these shortcomings.

Finally, the current study also showed that the situational context that defined playful aggression is viewed differently among certain groups. Specifically, current

results showed that parents viewed the context of aggressive play behavior differently than respondents who indicated that they were not parents. Similarly, administrators' perceptions were uncorrelated to teachers' perceptions. These findings demonstrated that certain individual characteristics affect how the context of aggressive play behavior is viewed. The final chapter discusses these findings in greater detail.

## CHAPTER 5

### DISCUSSION

As the numbers of young children enrolling in preschool has increased dramatically in recent years there is a great need for educators to provide high quality educational experiences in their schools/classrooms. It is also necessary that these experiences foster optimal development across *all domains of learning*. Because research suggests that children's play should be the foundation of early childhood education and because aggressive play is beneficial to young children's growth and development, more empirical research is needed to better understand this particular type of play to begin the elimination process of policies that prohibit it. Specifically, additional research that advances our knowledge and understanding of how attitudes towards aggressive play behavior are formed is needed to develop empirically grounded policies and pedagogy that increases aggressive play-based learning opportunities for young children.

Current research suggests that teachers, administrators, young children, and their parents have varying perceptions of playful aggression (Bauer & Dettore, 1997; Boyd, 1997; Logue & Detour, 2011; Logue & Harvey, 2010; Tannock, 2008). For example, Logue and Harvey (2010) found that teachers might be unable to distinguish play fighting from real fighting, therefore, prohibit aggressive play behavior in their classrooms altogether. Furthermore, Tannock (2008) found that both educators and children acknowledge R&T play as a prevalent classroom activity, but that educators perceive it as "inappropriate" in early childhood settings. Finally, research has also demonstrated that adults believe that "risky play" is necessary for children in order to foster skill development, build confidence, and learn how to avoid injury (Little et al., 2011). Despite

awareness that perceptions of aggressive play behavior vary among parents, children, and educators a consistent understanding of how these perceptions are formed remains absent from literature.

The current study extends the existing body of scientific knowledge related to perceptions of aggressive play behavior in several ways. First, the current study advances our understanding of methodologies commonly used to study playful aggression. Second, the current study improves researchers' knowledge regarding techniques commonly used to analyze data produced from these studies and offers an alternative analytic approach, one that is better equipped to identify "contextual effects." Finally, the substantive results from the current study have improved current empirical knowledge of how perceptions of aggressive play behavior among adults are affected by the context within which it is observed.

#### Methodological Advancements

Video recordings have been incorporated into methodologies used to study aggressive play behavior among children for more than a quarter century, including studies of superhero play (Parsons & Howe, 2006), war play (Watson & Peng, 1992), risky play (Little et al., 2011; Sandseter, 2009), and various forms of R&T play (Pellegrini, 1989a; Smith & Lewis, 1984). Another common approach to collecting data on perceptions of aggressive play behavior is through the use of self-administered surveys (Carlson, 2011b; Carlsson-Paige & Levin, 1987; 1990; 1995; Levin & Carlsson-Paige, 2006; Little et al., 2011; Logue and Harvey, 2010). However, the current research was the first known study to date that combines these two approaches for data collection.

Specifically, the current study improves educators' awareness of how perceptions of aggressive play behavior are formed by embedding video vignettes in an online data collection instrument (i.e., Qualtrics).

The innovative methodological approach used in the current study allowed for a systematic format and randomization of content. Furthermore, it allowed participants to complete a questionnaire at any time/place that was most convenient to them. It was also a cost effective approach for collecting data. Future research should continue to utilize technology in similar ways in order to not only build on current findings, but to advance the broader body of empirical knowledge related to early childhood education.

#### A New Analytic Approach

The current study also used a new analytic approach to “tease out” the complex causal recipes (Ragin, 2013) that affect perceptions of aggressive play behavior and that were hidden in the data. Specifically, Miethe and colleagues' (2008) conjunctive analysis of case configurations was used to add to the existing knowledge of how attitudes about aggressive play behavior are formed among adults. Although an increasing number of studies in fields outside of early childhood education have turned to conjunctive analysis as an alternative to more traditional approaches to data analysis (i.e., OLS and HLM), the current study is the first known investigation to apply it within our field. The current study demonstrated how these traditional approaches were incapable of answering the current research questions and showed how conjunctive analysis could benefit future research within early childhood education. Therefore, it is recommended that early



childhood research consider using conjunctive analysis as an alternative to traditional techniques.

### New Knowledge Regarding Perceptions of Playful Aggression

Finally, the current study extended the existing body of scientific knowledge related to perceptions of aggressive play behavior by answering three researcher questions. First, the current research examined whether perceptions of playful aggression were “situationally invariant.” In other words, the current study investigated the extent to which “context matters” in how aggressive play behavior was perceived among adults. Second, the current study tested whether the contextual factors believed to affect perceptions of aggressive play demonstrated “main effects” on perceptions or whether the influences of focal variables were context-dependent. Third, questions about whether situational profiles that defined the context of playful aggression and that were most likely viewed as “playful” differed significantly for parents versus non-parents and for teachers versus administrators were answered.

### Perceptions Are Situationally Dependent

Using conjunctive analysis of case configurations (Miethe et al., 2008) the first “truth table” produced for this study (see Table 10 in Results) revealed several interesting patterns about perceptions of aggressive play behavior and how adults’ perceptions of it are influenced by context. Specifically, none of the video vignettes that were viewed by participants were *always* characterized as “playful” and none were *always* considered “not playful.” Instead, adults’ perceptions of play behavior among 3- to 5-year old children varied greatly depending on the particular context of the behavior observed.

Furthermore, even among the contexts viewed as most/least “playful” significant contextual variability in adults’ perceptions was recorded.

Collectively, however, current findings neither support nor oppose existing claims about perceptions of aggressive play behavior (see, for example, Bauer & Dettore, 1997; Boyd, 1997; Carlson, 2011; Fletcher et al., 2011; Hellendoorn & Harinck, 1997; Little et al., 2011; Logue & Detour, 2011; Logue & Harvey, 2010; Parsons and Howe, 2006; Pellegrini, 1989a; Sandseter, 2009; Smith & Lewis, 1984; Smith et al., 2004; Tannock 2008) as the current study was designed to explore the influence of specific *combinations of causal factors* that affect adults’ attitudes about this form of playful learning. In short, the current study provided a new and unique perspective on this important issue in early childhood education by demonstrating that perceptions of aggressive play behavior are situationally dependent.

#### “Main Effects” Were Not Observed

The current findings also showed that the contextual factors considered (i.e., children’s age, supervision, weapon presence/type) do not have a consistent “main effect” on perceptions of playful aggression. In the current study, the term “main effect” was used to describe significant relationships that are identified by traditional analytic techniques (i.e., OLS and HLM) that are designed to model systematic correlation between a predictor variable and an outcome variable when rival causal factors are held constant.

For example, the isolated effect that age had on perceptions of playful aggression varied by an average of 62 percentage points across different situational contexts. In some instances, manipulating the *age* variable (i.e., changing its attribute from *similar*

aged children to *different* aged children) resulted in a 37% *increase* in the likelihood that playful aggression would be characterized by participants as “playful” (see Video No. 27 versus Video No. 9 in Table 10). However, under other circumstances (i.e., contexts) it *decreased* the likelihood by 25% (see Video No. 36 versus Video No. 18 in Table 10). These findings add to existing perceptual scholarship as it suggests adults’ attitudes towards aggressive play behavior are influenced by the age of the children involved in the play. The current findings help explain the specific conditions under which the age of children engaged in playful aggression positively and negatively affects adults’ perceptions.

Results from the current study also clarify the importance of supervision and the effect it had on attitudes towards aggressive play behavior by considering the greater context within which supervision occurred. Specifically, the current study demonstrated that having an adult (male or female) supervise children engaged in aggressive play was neither a necessary nor sufficient condition for the behavior to be perceived as “playful.” Rather, the positive effects of *supervision* on perceptions of aggressive play behavior were context specific. Existing scholarship suggests that supervision is a key component for supporting playful aggression (Freeman & Brown, 2004; Hart and Tannock, 2013b). However, the findings from the current study demonstrate that supervision does not exhibit a constant “main effect” on perceptions.

Additionally, the current study adds to our current understanding of the effects that particular toys have on perceptions of playful aggression. For example, Carlsson-Paige (1996) has encouraged adults to “limit the use of highly structured violent toys...” because they tend to look “quite different from war play with open-ended toys” (p. 73).

However, video profiles that included guns that shot darts (i.e., Nerf<sup>®</sup> dart guns), toys that Carlsson-Paige considers violent, were often perceived as “playful” within certain contexts.

In addition to producing new knowledge about attitudes towards aggressive play behavior, the current study also answered scholars’ recommendations for future research related to the isolated effects of specific variables. For example, Tannock (2008) encouraged researchers to investigate whether varying degrees of intensity of R&T play is associated with varying levels of acceptance of the behavior. In response, the current study not only showed how attitudes towards playful aggression were affected by children’s use of a weapon (i.e., a more “aggressive” form of play than aggressive play without weapons), but how they were influenced by the type of weapon (i.e., blasters/noise maker guns, light sabers, wizard wands, Nerf<sup>®</sup>/projectile dart guns, Nerf<sup>®</sup> swords & shields). As with the other focal variables considered (i.e., *age* and *supervision*), the current study demonstrated that the presence/type of weapon used by children engaged in aggressive play did not have a patterned “main effect” on attitudes. Rather, the influence of weapon presence/type on perceptions was dependent on the situation.

#### Group Differences Were Observed

Finally, the current study also added to the existing scholarship that addresses how playful aggression is viewed differently by parents/non-parents and by educators (e.g., Bauer & Dettore, 1997; Little et al., 2011; Logue & Detour, 2011; Logue & Harvey, 2010; Sandseter, 2007; and Smith & Lewis, 1984). For example, the current study helped advance our understanding of Sandseter’s (2007) research that demonstrated

that parents' perceptions of playful aggression are dependent on the degree to which physical injury is likely to occur. In the current study, however, findings showed that parents and non-parents perceive aggressive play behavior differently by comparing context-specific attitudes. When different aged boys played with Nerf<sup>®</sup> dart guns while being supervised by a female (i.e., Video No. 29 in Table 12), participants who were *not parents* always characterized the behavior as “playful.” However, participants who had children described the same scenario depicted in the video as “playful” less than 8-out-of-10 times (see Table 12). In other instances, the percentage of times parents and non-parents described aggressive play behavior as “playful” was nearly identical (see, for example, Video Nos. 18, 20, and 33 in Table 12). These findings extended past research on parents/non-parents attitudes towards playful aggression by illustrating how the context of the behavior had a significant—though different—effect on both groups.

Finally, the current study added to our understanding of how teachers/school administrators view playful aggression. For example, current findings extend the work of Logue and Harvey (2010) who demonstrated that perceptions of common characteristics of “active play” (i.e., R&T play) vary significantly among teachers. Although existing scholarship such as this is informative, findings from the current investigation extend this awareness in a similar manner as it did for parents and non-parents. Specifically, when the same aggressive play behavior was observed by administrators and by teachers, a weak non-significant correlation between perception scores was observed. Collectively, these findings demonstrate the particular contextual profiles that define playful aggression that were viewed differently/similarly by teachers and administrators. Prior to the current study, this level of detailed information was unavailable in the literature. A

discussion of the implication of these findings, the limitations of the current study and guidance for future research conclude this chapter.

#### Implications of the Current Study

Bauer and Dettore (1997) and Logue and Detour (2011) suggest that forms of playful aggression are developmentally appropriate within early childhood settings and that teachers should anticipate and support its inclusion. However, without clear distinctions between appropriate and inappropriate contexts for playful aggression policies will likely vary across early childhood settings, as demonstrated by Logue and Harvey (2010). The current research provides much needed guidance to educators by demonstrating particular combinations of factors associated with aggressive play behavior that are most likely to be perceived as “playful.” In addition, the profiles that are more likely to be perceived as “not playful” are also identified and may be further explored in such a way as to develop classroom policies and procedures deemed appropriate. This knowledge may then be the foundation for creating safety and best practice policy within early childhood educational settings.

Findings from this study may also be used in professional development programs that foster the inclusion of playful aggression within early childhood settings and to provide educators with a forum to eliminate zero-tolerance policies. Teachers may use the current findings to prepare safe and supportive indoor and outdoor learning environments that provide young children with play-based learning opportunities. That is, information contained in Table 10, for example, can be used as a guide for implementing the contextual situations most commonly identified within the current study as “playful.” Teachers will then be better prepared to allow and manage various types of playful

aggression such as wrestling, gun play, and sword play in a manner most likely to be considered a) beneficial to the children and b) not likely to be in violation of policies prohibiting playful behavior considered to be “not playful” (i.e., violent/serious aggression).

In summary, the knowledge gained from the current research is beneficial for both educators and parents. For educators, this newfound information will serve as support for the elimination of zero-tolerance policies as well as for the implementation of various forms of playful aggression within early childhood settings. Support strategies and guidelines may not apply with every form of playful aggression and within every context; therefore, educators must understand that adjustments may be needed. This research will also better inform administrators as to the creation of best practice and safety policy, while teachers will use this information to develop classroom rules and support strategies. Parents will likely gain confidence with their decision-making regarding allowing their child to participate in playful aggression and play with toy weapons. This research may better align the viewpoints between educators and parents as to how playful aggression may be supported at both home and school to maximize young children’s development.

#### Limitations

As with all research, the current study has certain limitations. For example, the current study used a convenience sample of early childhood educators from two facilities in one metropolitan area of the United States (i.e., Las Vegas, Nevada). Although convenience sampling enabled timely and cost-effective data collection, the current sample is unrepresentative of early childhood educators. This is evident, given that the sample

was comprised entirely of women. A more desirable sample would have included a) male educators, b) educators from throughout the US, and c) educators from other countries.

Second, only three variables were used to define the context of playful aggression. Additional variables could have been incorporated into matrixes produced from the conjunctive analysis of case configurations that was conducted in the current study (e.g., a child's gender or race), but to do so would have required more observations from a greater number of respondents. For example, adding gender to the contextual profiles would have doubled the original "truth table" presented in Table 10 from 36 profiles to 72.

Third, the audio in the video vignettes used in the current study was removed. It is likely that the dialog between the children playing in the videos would have influenced participants' perceptions. Clearly, the dialog between children engaged in playful aggression is important and defines a meaningful aspect of the context in which it occurs. However, because the variation in dialog could not be manipulated systematically across different contextual profiles audio was removed from the videos.

Finally, group comparisons were made for only two subsets of participants (i.e., teachers/administrators and parents/non-parents). If additional participants would have been recruited more group comparisons could have been made (e.g., comparing perceptions across genders, races, and levels of education). Furthermore, the matched profiles that were used in the group comparisons (e.g., see Tables 12 & 13) did not include all 36 situational contexts because not all profiles met the minimum observation criteria for each subgroup (i.e.,  $n \geq 5$ ). Both these limitations are associated with the relatively small sample size ( $n=41$ ) and the subsequent number of observations ( $n=492$ ).



Despite these limitations our understanding of how context affects perceptions of aggressive play behavior has been improved by the current study. The current study also provides answers that encourage future research in early childhood education.

#### Future Research

Much of the research that could build on the current study could do so by addressing many of the current study's limitations. For example, because audio was removed from the videos used in the current study future research should focus on how children's dialog during playful aggression affects adults' perceptions. The effects of scripted "mild aggressive language" (e.g., "I got you!" and "Oh no, you're down!") and "harsh aggressive language" (e.g. "I'm going to kill you!" and "You're dead!") could be incorporated into a conjunctive analysis of case configurations. This strategy would produce a more robust understanding of adults' perception formation.

Further research into adults' perceptions of young children's physical movements could also be undertaken. Although this study maintained strict control over the manipulation of variables included in the analysis, actions depicted within video profiles were not scripted. Therefore, there are slight differences in the way in which the boys engage one another physically. Again, this study may be replicated with the video profiles containing scripted play. For example, two sets of 36 video profiles could be created with both sets containing identical contextual components. However, one set could include "mild" scripted playful aggressive actions (e.g., non-contact punch, non-contact kick, sword play with restrained contact between weapons only) and the second set could contain "harsh" scripted playful aggressive actions (e.g., restrained contact punch, restrained contact kick, sword play with restrained contact to weapons and body).

A comparison between the physical behaviors could be analyzed, offering a deeper understanding of playful aggression and how it is perceived.

Furthermore, an exploration of adult males' perceptions of young boys' playful aggression is warranted. Although the vast majority of early childcare staff is female (U.S. Bureau of Labor Statistics, 2011), a greater understanding of fathers' perceptions of playful aggression would be valuable to early childhood professionals (Fletcher et al., 2011). Therefore, future research is needed to gain the perspectives of male teachers, administrators, and parents. Finally, future research should seek to understand how perceptions of aggressive play behavior among U.S. adults differ from those of adults from other countries.

### Conclusions

The current research—believed to be the first of its kind—demonstrates that adults' perceptions of young children's playful aggression are context-dependent, that no single factor considered (i.e., children's age, supervision, and weapon presence/type) demonstrated a “main effect” on adults' attitudes, and that parents and non-parents as well as teachers and school administrators viewed aggressive play behavior differently. These findings represent a meaningful contribution to the existing scholarship and have important implications on school/classroom policy regarding playful aggression. Finally, the current study provides a foundation for future research in this area, demonstrating that until a deep understanding of the relationship between adults' perceptions of aggressive play behavior and how context affects it is achieved, educators are not likely to develop scientifically informed policy and practice that optimize young boys' learning potential.

APPENDIX 1

IRB PROTOCOL



**Social/Behavioral IRB – Exempt Review  
Deemed Exempt**

**DATE:** August 28, 2014  
**TO:** **Dr. Jeffrey Gelfer**, Education and Clinical Studies  
**FROM:** Office of Research Integrity – Human Subjects  
**RE:** Notification of IRB Action  
Protocol Title: Playful Aggression and the Situational Contexts that Affect Perceptions  
Protocol # 1407-4871M

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This memorandum is notification that the project referenced above has been reviewed as indicated in Federal regulatory statutes 45CFR46 and deemed exempt under 45 CFR 46.101(b)2.

**PLEASE NOTE:**

Upon Approval, the research team is responsible for conducting the research as stated in the exempt application reviewed by the ORI – HS and/or the IRB which shall include using the most recently submitted Informed Consent/Assent Forms (Information Sheet) and recruitment materials. The official versions of these forms are indicated by footer which contains the date exempted.

*Any* changes to the application may cause this project to require a different level of IRB review. Should any changes need to be made, please submit a **Modification Form**. When the above-referenced project has been completed, please submit a **Continuing Review/Progress Completion report** to notify ORI – HS of its closure.

If you have questions or require any assistance, please contact the Office of Research Integrity - Human Subjects at [IRB@unlv.edu](mailto:IRB@unlv.edu) or call 895-2794.

## APPENDIX 2

### INVITATION EMAIL

Hello!

You have been identified as a prominent early childhood educational and care professional in Nevada. As such, I invite you to participate in a UNLV study, which is designed to advance our understanding of young boys' aggressive play and how adults perceive it.

To access the survey, click the link provided below and answer all of the questions that follow. Please note that the questions that include video clips will not have audio.

**The survey should take about 10 minutes to complete.**

Your responses will provide valuable information that may have an impact on early childhood professional development programs and policy.

**Your participation is greatly needed and appreciated!**

**Follow this link to the Survey:**

[\\${1://SurveyLink?d=Take}](#) the Survey}

Or copy and paste the URL below into your internet browser:

[\\${1://SurveyURL}](#)

If you try to view the videos but they do not play, try using a different browser. Chrome and Firefox work best. If you try using a different browser and the videos still do not play, try these troubleshooting steps:

#### **Check Firewalls**

Computer firewalls sometimes block YouTube videos from playing. Adjust your firewall settings so that [www.youtube.com](http://www.youtube.com) is listed as a trusted site and other applications (like Quicktime, Real Player, or Windows Media Player) aren't set as the default streaming application.

Here's how to find your firewall settings:

**For PC users:** click the Start menu, click Control Panel, click Security, then click Windows Firewall

**For Mac users:** click System Preferences, click Security & Privacy, click the Firewall tab

**Check Pop-up Blockers**

It's possible that YouTube is being blocked if you have ad or pop-up blocking software installed on your computer. Here's how to check your computer for ad or pop-up blocking software (like Norton anti-virus):

**For PC users:** click your computer's Start menu, then click All Programs

**For Mac users:** click Finder, then click Applications To learn more about how to disable your specific ad-blocking software, visit the software's support page and search for instructions.

Sincerely,  
Jennifer

\*\*\*\*\*

Jennifer L. Hart, Ph.D. (candidate)  
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\*\*\*\*\*

Follow the link to opt out of future emails:  
\${1://OptOutLink?d=Click here to unsubscribe}

## APPENDIX 3

### INFORMED CONSENT



### **Playful Aggression and the Situational Contexts that Affect Perceptions**

#### **Purpose of the Study**

You are invited to participate in a research study. The purpose of this study is to assess adults' perceptions of playful aggression among young children.

#### **Participants**

You are being asked to participate in the study because you fit this criterion:

- Adult, 18 years or older

#### **Procedures**

If you volunteer to participate in this study, you will be asked to do the following: view a total of 12 videos, each lasting approximately 15 seconds and answer a series of questions that follow. The total time it will take to complete the survey will be approximately 20 minutes.

PLEASE NOTE: None of the questions require a response. You may skip any question you do not wish to answer by simply clicking on the "next/forward" arrow.

#### **Benefits of Participation**

There are no direct benefits to you as a participant in this study. However, we hope to learn more about adults' perceptions of children's playful aggression.

#### **Risks of Participation**

There are risks involved in all research studies. This study may include only minimal risks. You may become uncomfortable or bored answering some of these questions.

#### **Cost/Compensation**

There will not be financial cost to you to participate in this study. The study will take approximately 20 minutes to complete. You will not be compensated for your time.

#### **Confidentiality**

All information gathered in this study will be kept completely confidential. No reference will be made in written or oral materials that could link you to this study. All records

will be stored in a locked facility for five years after completion of the study. After the storage time the information gathered will be shredded or deleted.

I acknowledge that I have receive a copy of the informed consent information

I Want to Participate

I **Do NOT** Want to Participate

APPENDIX 4

SURVEY QUESTIONS



**Playful Aggression and the Situational Contexts that Affect Perceptions**

(Random Videos 1-12).

INSTRUCTIONS: Watch the 15-second video below by clicking the play button. When the video is finished, record your perception of the children's behavior by clicking one of the buttons between the words "Playful" and "Violent".

EXAMPLE: If you believe the behavior was entirely playful, click the button that is farthest to the left. If you believe the behavior was entirely violent, click the button that is farthest to the right.



Playful

Violent

PLEASE NOTE: The following is a list of questions that will be contained in the proposed survey. The order in which they appear and the formatting of each question (e.g., font, color, drop down menu, tick boxes, etc.) will be optimized using the Qualtrics platform.



1. What is your gender?
  - Male
  - Female
  
2. What is your race/ethnicity?
  - White, non-Hispanic
  - Black, non-Hispanic
  - Asian/Pacific Islander, non-Hispanic
  - Native American/Alaskan Native, non-Hispanic
  - Other, non-Hispanic
  - Hispanic, any race
  
3. Indicate the highest level of formal education that you have completed.
  - Doctorate Degree
  - Professional school degree
  - Graduate School (Masters Degree)
  - College (Bachelors Degree)
  - College (Associates Degree)
  - College (No degree)
  - GED, technical/trade school, or equivalent
  - High school graduate
  - Elementary
  - Never/Kindergarten
  
4. What is your current marital status?
  - Never married
  - Divorced/Separated
  - Widowed
  - Married/Common Law/*de facto*
  
5. What is your current age?
  -
  
6. As a young child (i.e., age 3-5 years), did you engage in any of the following activities? (choose *all* that apply).
  - War/Weapons Play
  - Bad Guy Play
  - Superheroes
  - Rough & Tumble (e.g., Wrestling)
  - Play Fighting (e.g., Kicking, Punching)
  - Other (please specify) \_\_\_\_\_
  - None of the above

7. As a young child (i.e., 3-5 years) did you play with any of the following toys? (choose all that apply).

- Toy water pistol/squirt gun
- Toy noise-maker guns/blasters
- Toy gun with projectiles (e.g., dart, disc, pellet)
- Toy swords/knives
- War toys (e.g., grenades, army men, tanks)
- None of the above

8. Which of the following best describes you?

Check all that apply

A Parent...

- of at least one child younger than age 3 years
- of at least one child aged 3-5 years
- of at least one child aged 6-8 years
- of at least one child older than age 8 years
- I am not a parent

9. To what extent do you agree with the following statements regarding the intellectual development of young children...

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
War/Weapons play is beneficial to young children					
Bad Guy play is beneficial to young children					
Superheroes play is beneficial to young children					
Rough & Tumble play is beneficial to young children					
Play Fighting is beneficial to young children					

10. To what extent do you agree with the following statements regarding the social-emotional development of young children...

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
War/Weapons play is beneficial to young children					
Bad Guy play is beneficial to young children					

Superheroes play is beneficial to young children					
Rough & Tumble play is beneficial to young children					
Play Fighting is beneficial to young children					

11. To what extent do you agree with the following statements regarding the physical development of young children...

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
War/Weapons play is beneficial to young children					
Bad Guy play is beneficial to young children					
Superheroes play is beneficial to young children					
Rough & Tumble play is beneficial to young children					
Play Fighting is beneficial to young children					

12. To what extent do you agree with the following statements regarding the language development of young children...

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
War/Weapons play is beneficial to young children					
Bad Guy play is beneficial to young children					
Superheroes play is beneficial to young children					
Rough & Tumble play is beneficial to young children					
Play Fighting is beneficial to young children					

13. Which of the following best describes you? (choose **one**).
- A lead teacher of children 6 weeks to 2 years old
  - A lead teacher of children 3 to 5 years old
  - An assistant teacher of children 6 weeks to 2 years old
  - An assistant teacher of children 3 to 5 years old
  - A center director/administrator
  - Other school administrative staff
  - A primary/elementary teacher
  - A secondary/middle school teacher
  - A tertiary/university teacher (e.g., lecturer, professor)
  - None of the above
14. Does your **classroom** have a policy against *rough play* or *play fighting*?
- Yes
  - No
  - Don't know
15. Does your **school** have a policy against *rough play* or *play fighting*?
- Yes
  - No
  - Don't know

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