

Superhero Materials and Boys' Physically Active and Imaginative Play

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ABSTRACT

Superhero Materials and Boys' Physically Active and Imaginative Play

Amy Parsons

The present study examined the effects of superhero materials on boys' physically active and imaginative play in a group of middle-class preschool children. Research findings have indicated that media related play, more specifically superhero and rough and tumble may be associated with aggressive and violent behaviour, as well as limited activity with regards to role play. Fifty-eight boys between the ages of 4 and 5 years ($M = 54.95$ mos., $SD = 5.28$ mos.) from middle SES backgrounds who attended day care full-time participated in the study. Eighteen preschool educators, as well as fifty-eight parents participated in the study. The participants (male dyads) were observed for the frequency and quality of roles, themes, level of physical activity in their play, as well as aggression. Each dyad participated in two play sessions, one including superhero materials (media related) one nonsuperhero (non-media related). The parents and educators were asked to respond to questionnaires pertaining to boy's play choices and behaviours. Each dyad's ($n = 29$) play behaviour was coded for the type and number of pretend play roles, themes, amount of physical activity, as well as aggression in both toy conditions. It was found that the male dyads engaged in more character/fictive (media related) roles in the superhero condition than the nonsuperhero condition. Finally, dyads were found to be more physically active in the nonsuperhero condition than the superhero condition and no aggression or violence was associated with the play.

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Superhero Materials and Boys' Physically Active and Imaginative Play

Statement of the Problem

The mass media plays an instrumental role in children's play in relation to toys, themes as well as role enactment. A great concern has arisen among parents and educators as well as professionals regarding the endorsement of promotional toys and the influence that they may have on young children's imaginative play. Children are engaging in pretense related to television and film characters and frequently this appears to be linked to television superheroes. A major concern amongst adults, teachers and the early childhood community is that children's superheroes are depicted as violent crime fighters.

The question that arises is: what influence does superhero vs nonsuperhero materials have on boys' physically active and imaginative play? This appears to be a heavily debated topic, which has evoked great discussion in the educational field. Many theorists and practitioners warn about the violent and aggressive nature of superhero play. (Kostelnik, Whiren, & Stein, 1986; Kuykendall, 1995; Carlsson-Paige & Levin, 1990). In fact, this type of play occurs with and without the use of play props. However, there is not enough empirical data linking superhero play to violence. Scholars who have conducted empirical, as well as theoretical studies, continue to debate the heated issue of whether this type of play is developmentally appropriate for young children. According to Boyd (1997), the studies that do exist offer only a few anecdotal reports of increased aggression and were based on limited surveys from teachers or were derived from samples that were not randomly selected nor were they free from bias (see Levin & Carlsson-Paige, 1995a).

Since the deregulation of children's television in 1984, a massive transformation has occurred that enables the joint marketing of television programming and associated products (Levin & Carlsson-Paige, 1995b). Following the deregulation of television,

broadcasting media and toy industries were able to market toys, products, television shows as well as movies to children. Children are virtually bombarded with products bearing logos of the most recent superheroes from television series and movies. The logos of these superheroes can be found on lunchboxes, t-shirts, school bags and other product paraphernalia (see Kline, 1993; Kline & Pentecost, 1990). The focus of the media is on capturing and maintaining young viewers' attention and extending this influence into children's imaginative play.

Based on the findings and evidence described above, the present study investigated the effects of superhero materials on the quantity and quality of 4- and 5-year old boy's physically active and imaginative play. In the present thesis, the research investigated was the following: what effects do superhero materials have on boys' physically active and imaginative play? The study also investigated the frequency of superhero play, the themes and roles enacted through this type of play, as well as the level of physical activity and presence of physical and/or verbal aggression associated with the play. The literature reviewed will include research on the development of play, focusing on imaginative (make-believe) play in close conjunction with the symbolic stage of play. In addition, role enactment as well as high and low realism toys will be reviewed. The literature review will also encompass the description of superhero play with specific attention given to superhero play as a specific case of rough and tumble play. Psychological theories of Piaget, Vygotsky and Mead deemed relevant to this study will also be examined. The hypotheses based on the literature are stated as well as the methodology used to examine them. Finally, the results of the research are discussed in relation to roles, themes, level of physical activity, and aggression.

What is Play?

According to Carlsson-Paige and Levin (1987) “play is the primary vehicle through which children work on developmental issues” (p. 67). Play is regarded as an important element in children’s development and may serve many beneficial purposes such as providing children with opportunities for exploration, interaction with others, a means of controlling and expressing emotions and developing skills to solve problems (Berk, 1994). Play provides children with opportunities for social development as they learn to share materials with playmates, join play groups, and solve conflicts. Play is considered to be vital to children’s physical development, as it helps to build fundamental fine motor skills such as hand coordination, finger dexterity as well as gross motor skills such as jumping, running, throwing, and climbing (Brewer & Kief, 1997). Play also provides an opportunity for children to develop emotionally as well as express their fears and anxieties through role-play. Thus, play serves many beneficial purposes for children and allows them to cope with a sometimes confusing world.

Through play children are able to manipulate and experiment with various materials and props. Play is within itself a prerequisite of learning. Bettelheim (1987) posited that play involves the child in dealing and coping with past and present concerns. His theory envisions play as a useful tool that prepares children for future endeavours and tasks that they may have to entertain during this developmental journey. Play is considered to follow an inverted-U developmental course; it begins in early infancy, peaks during childhood, then declines in adolescence, and practically dissipates by adulthood (Fagen, 1981; Rubin, Fein, & Vandenberg, 1983).

According to the literature many theorists such as Piaget and Vygotsky support a constructivist view on play. Piaget (1962) saw play as an opportunity for the development

of thinking that incorporates aspects of adapting and changing the environment to meet one's needs and changing oneself to meet the demands of the environment. Piaget (1962) advanced his theory of this interactive process of adaptation as assimilation and accommodation. Therefore, throughout play the child is able to assimilate new elements of his/her experience by incorporating them into his/her already existing field of knowledge. Through play the child also learns to accommodate his/her thought processes by structuring his/her thinking in order to adapt to new experiences by creating new mental schemes or changing existing knowledge to incorporate new information. Therefore, Piaget advocated that play through interaction allowed for assimilation and accommodation, thus children were able to balance their personal needs for adaptation as well as their internal states (Penn, 2000). Piaget (1962) also posited that all children pass through various predetermined stages of development and specified types of play are associated with each stage. In this study, the focus will be on the preoperational stage of development, specifically on the symbolic stage of play, which includes children aged 2 to 5 years.

Vygotsky (1978) advocated a social-cognitive view on play and posited, "Every function in development occurs first at a social level and then an individual level" (p. 193). He believed that play assisted children in learning adult societal roles, for example through the role of pretend play children learn to understand adult roles. Vygotsky also developed the theory of what he called the Zone of Proximal Development (ZPD), which he believed that children could attain through scaffolding. Through the experience of a more knowledgeable peer or adult, Vygotsky believed that children in their play could be guided towards their ZPD (higher level of thinking or functioning). However, in this sense Vygotsky differed from Piaget in that he advocated the social function as taking

precedence over the individual. According to Vygotsky the sense of mastery and potency of learned skills in much of children's play, especially fantasy play is what motivates young children to evolve into the next realm of pretense (Pellegrini, 1985). Further, Vygotsky argued that children attain their zone of proximal development at their own stage of development and not according to predefined stages as with Piaget. Vygotsky's conception of play permitted the child to reach the ZPD through social experiences.

Mead (1934, cited in Penn, 2000) viewed play as a "major vehicle for young children to learn to differentiate their own perspectives from those of others in their social worlds" (p. 83). As children take on pretend roles of others and coordinate those roles with those taken by their play mates, they come to view their own behaviour from perspectives of others" (Penn, 2000, p. 83). Therefore, Mead's theory on the function of play is one that advocates a developing sense of self through role play and abstract thinking in fantasy play and rule construction. Mead saw the young preschool child as someone who develops in what he named the "play stage" involving the development of self and accomplishing role transformations from self to others with little elaboration or perspective. Mead believed that via play experiences, children would develop through two other stages in the process of developing a sense of self, which were the "game stage" and the "generalized other stage" (Penn, 2000). Therefore, Mead posited that the major function of play was to enable the child to develop a sense of self through social interaction.

Imaginative/Make-believe Play

Berk (1994) described imaginative play as being an action whereby children experience a sense of emotion or pleasure. While the child is playing he/she deals with objects as having a specific meaning. A study conducted by the United States Surgeon

General's Advisory Committee (1972) concluded that make-believe play was a necessary stage in children's development of self. The committee defined make-believe as "voluntary transformation of the here and now, the you and me, and this and that, along with any potential for action that these components of a situation may have" (p. 82).

Imaginative play serves as an outlet for the child to do all things that are forbidden—to engage in the unlimited power of adults. The child is able to satisfy this need of inferiority and helplessness through make-believe play. Thus, make-believe play fulfills the needs of young children: it compensates for being dependent relative to adults and secondly, it enables children to learn new skills and master old ones (Tudor-Hart, 1955).

Early childhood theorists suggest that dramatic (pretend) play is one of the best ways children have to express themselves, to deal with the many complexities of their universe, to develop social, cognitive, language, and social skills (Pellegrini & Bjorklund, 1998; Fein, 1981). Theorists posit that it is through imaginative play that children are able to feel free to express their innermost feelings and deal with the outside world. Dramatic play occurs daily in the lives of young children as they are constantly involved in transformations, imitation of people, animals, and machines. Further study suggests that dramatic play encompasses the children's ability to interact with the environment, engage in object transformations, and adopt roles to act out stories, real or imaginary as well as to develop new stories (Mellou, 1994). Moreover, a growing body of research reveals that make-believe or imaginative play strengthens various mental, language, reasoning and creative abilities (see Connolly & Doyle, 1984; Saltz, Dixon, & Johnson 1977; Pellegrini & Galda, 1982). Fantasy or imaginative play contributes to social maturity and the construction of diverse aspects of cognition (Berk, 1994).

As noted above, Vygotsky's (1966) theory and research situated imaginative play within a sociocultural context (Berk, 1994). He envisioned adults and peers scaffolding children's play and nurturing the transition to make-believe play. Piaget (1962) characterized make-believe play as a means through which children practice representational schemes. Piaget (1962), as also Bruner (1986), tended to focus on the cognitive aspects of fantasy play. Piaget (1962) stated that the child's ability to take part in fantasy play symbolised the child's intellectual development. According to Vygotsky (1978), imaginative play supports the development of two complementary capacities: the ability to separate thought from objects and actions, and the ability to renounce impulsive action as a result of self-regulatory activity. Hence, imaginative play helps children separate thought from the surrounding world by the implementation of object substitutions. For example, when the child is able to use a stick to represent a puppy or a pillow to represent a sleeping newborn, their relation to reality is dramatically changed. The stick then becomes a pivot for separating the meaning of the "dog" from a real dog; similarly, the pillow becomes a pivot for distinguishing a baby from a real baby. This is considered by Vygotsky as vital preparation for abstract thought.

The study of imaginative play has focused on its social aspects. Many theorists have posited that make-believe play is an integrative tool in facilitating peer cooperation and understanding (Parten, 1933; Gonçu, 1993). Parten (1933) labelled the most advanced form of peer social participation as cooperative play, in which children strive to reach a common goal through negotiation of plans, and roles as well as division of labour. Additionally, social pretend play according to Gonçu (1993) requires intersubjectivity—a process whereby individuals engaged in the same activity who began interacting with

different perspectives arrive at a shared understanding. These aspects of pretense play a major role in the socialization and development of the child. We now look to a specific stage in children's development of imaginative play: symbolic play.

Symbolic play. In keeping with Piaget's stages of play, children between the ages of two and five years of age are considered to be in stage II "symbolic play" (Singer, 1973). This type of symbolic play incorporates (a) play that distorts reality: pretend as well as pure assimilation, (b) representation of absent or missing objects, (c) parallel play, and (d) compensatory play. Symbolic play can be considered as imaginative role-playing that involves the transformation of persons, objects, or events into make-believe or pretend persons, objects, or events (Hanline, 1999). Symbolic play is described by Vygotsky (1966) as unique to the individual because it stems from one's thoughts and understanding. Within this stage of symbolic play children may commence with one action familiar to them that may be directed towards the self that requires the use of a real life object (e.g., raising a fork to mouth to pretend to eat). Once children have processed and mastered this level they then proceed by using objects that are less realistic and eventually use no objects at all; then they are able to use multiple pretend objects at once. Eventually they are able to direct play behaviours towards others and include others in the overall planning and negotiation of the pretend play scene. Symbolic play is not just a passing phase in which children develop into logical and abstract thinkers, rather it involves a holistic feature of human development (Piaget, 1962). According to Singer and Singer (1990), pretend or symbolic play serves many purposes, among these are self-amusement, abstract thought, the ability to deal with the many complexities of the world, capacity to develop human imagination and to develop thoughts into stories as well as the

manipulation of memory in order to represent our physical and social worlds in new scenarios.

In conjunction with symbolic play one must assume that in order to engage in pretense or imaginary symbolic play the child obviously requires fantasy (Almqvist, 1989b). In order to assume that a branch is a broom, a pebble a car, or a blanket a newborn there needs to be fantasy in the pretense. There appears to be something out of the ordinary in children's play, something magical in their "as if" that enables them to substitute a shape or object for the real object. This fantasy serves many benefits in their development. It is through their "as if" activities that children are able to explore novelty, repeat and restructure, to assimilate and accommodate scenarios and develop schemas. Imaginative play is a powerful tool that enables the child to engage in mental imagery, which permits the child to form a representation of his/her world and allows him/her to enhance vocabulary by speaking out loud and experimenting in his/her pretense (Singer & Singer, 1990). Furthermore, children as they begin to explore fantasy in their pretense discover and confront their emotions such as terror, fear, anger, sadness and aggression (Mandler, 1984; Singer, 1973; Tomkins, 1962). Through imaginary play the child is able to reduce the features of the external world to manageable sizes, allowing him/her to work through the many complexities between what he/she already knows and the unknown of the adult world. Hence, with practice and repetition, the child is able to comprehend that he/she can control the uncontrollable through the fantasy play and confront his/her fears, hostilities, and as well as uncertainties.

The first signs of pretend play have been noted to commence as early as 18 months and by two years of age they often take the form of representation with an object (e.g., pretending to drink water from an empty cup or eating from an empty plate) (Singer &

Singer, 1990). According to Singer and Singer (1990), children use symbolism in their play in order to imitate and accommodate complex adult actions and speech. In order to have meaning in their play children need to develop scripts. Through these scripts the child plays with an image and a specific plan in mind, story or narrative that is sequential, having a beginning, middle and end (Singer & Singer, 1990).

Role enactment. Research in the area of fantasy play implies that role enactment is an important venue that children experience and transform throughout their pretense (Pellegrini & Galda, 1982). Studies suggest that the child has the ability to infer and imagine the role identity behind the actual pretend actions (Garvey, 1976; Trostle & Yawkey, 1983). This implies a significant transformation in the child's dramatic play because it indicates that the child is aware and is conscious of others and comprehends role attributes, as well as role appropriate actions (Garvey, 1976; Trostle & Yawkey, 1986). Theorists infer that role-enactment behaviours are influenced by social situations (the other participants, adults, and children involved in the play), cognitive development, and personality factors (Garvey, 1975). Garvey and Berndt (1975) distinguished four types of pretense roles: (a) functional roles that tend to be organized by an object or situation; (b) relational roles such as the mother-child, husband-wife; (c) character roles that involve the use of stereotypes such as (fireman, doctor) or fictional characters (Superman, Spiderman, Power Puff Girls); and (d) peripheral roles, which are discussed but not enacted (imaginary friends). As children develop they become more interested in enacting roles that are less familiar than the typical house themes and they begin to progress towards more fictional and novel occupational roles (Garvey & Berndt, 1975).

The type of role and theme that the child chooses to engage in appears to rely on many factors, such as the environment and the props. As demonstrated by Howe, Moller,

Chambers and Petrakos (1993) and Petrakos and Howe (1996), the role that children engage in depends on the setting of the environment. An environment that is novel for a young child will initially elicit more play, however the child will return to familiar themes after exploration. In addition, it is believed that thematic centers may limit children's role enactment to the specific theme of the centers (Petrakos & Howe, 1996). Furthermore Howe, Moller and Chambers, (1994) and Howe et al. (1993) demonstrated that more sophisticated dramatic play was observed in familiar (i.e., house, tea party) as opposed to less familiar thematic centers (i.e., post office). Therefore, it is believed that children will engage in a greater amount of pretense when the themes and props are familiar. Hence, the physical environment does play a crucial role in influencing the range of play behaviours among children. Highly structured physical play environments may result in more imitative types of dramatic play whereas areas with lower structure may promote more creative types of pretense (Droege & Howes, 1991). Consistent with the belief that the physical environment plays a crucial role in the play behaviours of children, it is also noteworthy to discuss the interaction between the environment and toys.

High Vs Low Realism/Structured Toys

A common term in the research literature for nonrepresentational play materials is "low realism or low structured toys", whereas the term for representational play materials is "high realism or high structured toys" that are considered to be miniature copies of real objects. Low realism toys have fewer distinct counterparts in the real world (McLoyd, 1983). High realism toys usually represent one thing—so often these types of toys are seen as allowing one correct way to play with them. Hence, the latter is considered by many to hamper children's fantasy play (McLoyd, 1983). Minimally structured toys are those toys

that allow greater freedom for the child to manipulate and extend in their play. Examples of low structured toys could be paints, play doh, wooden blocks, paper, cardboard boxes, pipe cleaners, rag dolls or costumes. Highly structured toys are those that serve a specific purpose or cause and are highly identifiable by children and adults. These types of toys include plastic cutter or play doh molds, a race car, a dollhouse, Barbie dolls, GI- Joe dolls, superhero characters or figurines, nurse uniforms, army uniforms (Pulaski, 1973). High realism toys portray the real object so they are considered to be easier for the children to identify with (McLoyd, 1983).

As noted by Pulaski (1973), even the simplest of toys can “extend the length of imaginative play” (p. 19). Pulaski (1973) reported that more varied themes as well as fantastic adventures were elicited by the minimally structured materials provided to children in kindergarten and middle childhood than were highly structured toys (Pulaski, 1973). However, studies do show that very young children need more structured toys in their environment in order to engage in pretend play as opposed to their older counterparts (Pulaski, 1973; Connolly, Doyle, & Reznick, 1988). Children aged 5 to 7, will carry out transformations more often than younger children (Connolly et al., 1988). As children’s representational skills become more refined they are able to use fewer realistic objects in their play and, consequently can engage in more frequent transformations. On the other hand, it is important to highlight that there is no evidence in the literature that children’s play would be less stereotyped and diversified with low structured play materials (see Robinson & Jackson, 1987). Also interesting to note is that research has often shown that children will play initially with elaborately constructed toys such as motorized and replica figurines, however in the long run these toys are often found under the bed or at the bottom of the toy chest (Almqvist, 1989b).

In accordance with Kurt Lewin (cited in Berk, 1954) and Bronfenbrenner (1979), one can conceptualize the environment and toys as being transactional. By transactional what is meant is that children and toys influence each other; they are interdependent. However, the ways in which children interact with specific toys will vary according to many factors such as temperament, personality, age, gender as well as background. Toys do not independently elicit the behaviour of the child, but rather children's play and language tend to follow the themes suggested by the toys or props themselves (Quiltich & Risley, 1973; Howe et al., 1993), especially with functionally explicit or realistic toys such as a doctor's kit. However, when children opt for fantastic less realistic toys the play tends to be more varied, but shorter (Pellegrini, 1985, 1987). Hence, children appear to play longer with realistic toys as opposed to ambiguous toys. An important factor in selecting a toy is the gender of the child, as well as parental influence.

Toys related to gender. According to the literature, children appear to play longer and in more complex ways when they interact in same-gender groups and with gender-preferred toys (see Huston, 1983; Rubin et al., 1983). Valued toys and social groups may elicit complex play and language because children are motivated to interact with peers around preferred toys. Research shows that girls prefer familial games and boys tend to gravitate towards fantastic games (McLoyd, 1983; McLoyd, Warren, & Thomas, 1984). Boys are considered to typically exhibit greater enjoyment in their fantasy play, as well as engage in more fantasy play than girls (Pulaski, 1973).

Studies concur that boys consistently choose masculine types of toys such as soldiers or trucks, whereas girls typically are reported choosing more feminine type toys such as dolls or tea sets (Maccoby, 1988; Garvey, 1990). The origins of preference can be traced in large to parental behaviour, to parents' influence as models and to their approval

and support of children's interest in sex-stereotyped objects (see Garvey, 1990; Maccoby, 1988).

Superhero Play: What is it?

In keeping with the notion that imaginative play is a pertinent part of the development of the young child we now look to a special type of fantasy play: superhero play. What is superhero play and why is it such a controversial issue? According to Boyd (1997), superhero play refers to "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" (p. 23). There is no allusion in the definition to being aggressive or violent, however, it does involve the child in pretense, following an adventurous theme sometimes linked to physical activity. Physical activity has important implications for the child's physical, cognitive, as well as social development (Pellegrini & Smith, 1998). The physical activity involved in this type of play is considered to be crucial in the development of the child and appeals particularly to boys in that it enables them to run, wrestle, jump, and shout. It appears that boys find this type of play appealing for several reasons: primarily because children are intrigued by the powers that superhumans have; secondly, superheroes demonstrate extraordinary strength and are capable of incredible accomplishments; thirdly, superheroes possess powers children wish they had (Bauer & Dettore, 1997). Therefore, through this type of play enactment, children are able to access certain powers and have control over things that they would not have in everyday pretense. When children take on the role of the superhero they are able to access these powers, which provides them with the opportunity to be strong and powerful beings in their play.

Thus, superhero play is appealing to young boys because it allows them to assume roles and explore different personas. They are able to explore and experiment through their play the type of person they can become. Additionally, the fact that the superhero is always good is also appealing for children because people look up to superheroes for leadership and to solve problems. Hence, superhero play provides a release from the tension and frustration of everyday lives and allows children to be the hero to save lives, consequently permitting them to attain success in achievable ways (Bauer & Dettore, 1997). Researchers have outlined three dominant themes that superhero play elicits: (a) capture and rescue, (b) submit or vanquish, and (c) attack or flee (Carlsson-Paige & Levin, 1990). Children, especially boys, enjoy vigorous physical activity and superhero play accentuates the running, jumping, wrestling, and shouting aspects. Thus, superhero play appears to serve as an outlet for children to display their competence and strength while they engage in the role of superhero who will save the day. So why does this type of play elicit such concern amongst educators and parents?

The literature on superhero play offers evidence that children's involvement in superhero play is a growing concern in the educational field (Carter, 1995; Levin & Carlsson-Paige, 1995a; Greenberg, 1995; Gronlund, 1992). According to Boyd (1997), the number of articles classified under superhero play as a subject between 1990-1995 was twice that found during 1985-1990 time span. This increase in study and attention indicates that teachers' concern for the safety of children and for themselves is increasing as a result of the worry about the violence permeating society and its effects on children's pretense. Yet, it appears that there is not enough valid data on the supposed increases of violence in children's superhero play, nor is there empirical data on the value of superhero play (see Boyd, 1997). Boyd's (1997) research depicts a very different perspective on the

actual violence associated with superhero play and she contends that there are few published reports documenting this increase; rather reports are based on anecdotal reports and surveys of teachers of young children (see Levin & Carlsson-Paige, 1995a; Boyatzis, Matillo, Nesbitt, & Cathey, 1995b). In particular, Boyd criticizes Levin and Carlsson-Paige's survey for not being randomly selected and being conducted at a conference on superhero and war play in the classroom.

One study conducted by Boyd (1997) involved the collection of time interval samples with children aged 3-5 years in a laboratory preschool setting. The results illustrated that only two of the seventeen children exhibited superhero play during a 1-month period. In her second sample consisting of sixteen children, only 5% of the children observed engaged in play that could be classified as superhero play. Boyd's results also highlighted that in both samples boys were the only superhero players. During the time span of the study none of the children involved was observed being physically hurt or engaging in any violence while engaged in superhero play. These findings provide evidence to contradict previous authors (Carlsson-Paige & Levin, 1990; Boyatzis, Matillo, & Nesbitt, 1995a) that superhero play is aggressive and indicates the necessity of studying this type of play in greater depth.

Superhero play: A special case of rough and tumble play. Boyd argued that superhero play should be considered as a special type of rough and tumble play (R & T). R & T play is defined as "friendly chasing and play fighting. There is running, chasing and fleeing; wrestling, jumping up and down with both feet together..., beating at each other with an object but not hitting, laughing" (Berk, 1994, p. 355). This definition is in stark contrast to the definition of aggression (i.e., behaviour that is defined as a physical or verbal act directed at a person or object with intent to harm). In aggressive play children

do not play together after an incidence of fighting with aggression, nor do they exchange roles during play. That is, the perpetrator of the aggression does not trade roles with the victim (Pellegrini & Smith, 1998). However, in R&T and superhero play children engage in role taking and they take turns in roles such as “bad guys” and “good guys” (Johnson, Christie, & Yawkey, 1987; Pellegrini & Boyd, 1993).

By exemplifying superhero play as a special case of R&T this may enlighten research theories as well as provide a possible hypothesis as to what functions superhero play may offer. Boyd (1997) argues that R&T play and superhero play have many commonalities such as: R&T and superhero play both can involve chasing, wrestling, mock fighting and battles as well as attacks (Kostelnik et al., 1986); secondly, R&T frequently involves fantasy enactment or pretending as does superhero play (Smith & Connolly, 1987); thirdly, adults often misinterpret R&T and superhero play as aggressive behaviour (Kostelnik et al., 1986); furthermore R&T play often is identified as pretend play in research studies (Pellegrini, 1987); additionally, teacher descriptions of superhero play often indicate that this play involves fighting, kicking and martial arts moves. Moreover, children often assume the role of the superhero character in the R&T play. Therefore, considering the evidence of the similarities between these two types of play it may be possible to consider superhero play as a special type of R&T play.

Following from Boyd’s (1997) argument, one may find that superhero play associated with R&T play may serve three important potential functions: affiliation, dominance, and social skills facilitation (Smith & Boulton, 1990). R&T play may help children form or maintain friendships because R&T partners are consistently found to be friends (Smith & Lewis, 1985, Pellegrini & Smith, 1998; Pellegrini, 1987). Smith and Boulton (1990) suggest that through R&T play children can maintain or improve their

ranking with hierarchy within the social group, for example, by either picking an equal or slightly stronger play partner and suffer little if not successful. Some researchers offer that R&T play presents children with opportunities to develop social skills, which leads to successful peer interactions (Pellegrini, 1988; Pellegrini & Smith, 1998).

Commonly cited play themes of R&T play are cops and robbers, Star Wars, re-enactment of television shows such as Power Rangers, and Spiderman. Therefore, superhero and R&T play are closely related. Superhero play often is a part of R&T; the striking difference between the two types of play is that R&T can occur without superhero play. Superhero play is influenced by television programming for young children because children enact their favourite programs in their dramatic play. Statistics indicate that a seemingly low percentage of children in preschool engage in R&T play; 5% in preschool and 10% in primary grades (Johnson et al., 1987). R&T play seems to increase at the toddler-preschool period and then during primary grades, with the peak age being four to five years of age (Pellegrini & Smith, 1998). As a result, it appears that superhero and R&T play account for an extremely small proportion of children's play, which, indicates that superhero play is not a frequently occurring type of play, nor should it occupy a great deal of concern in relation to the level of physical activity associated with this play. Children who engage in superhero play appear to be males within the age frame of three and ten years of age (Pellegrini, 1987) and appear to be friends and have similar interests in activities (Smith & Boulton, 1990).

An important concern is that superhero play has the appearance of being aggressive, which may explain part of its appeal to young boys (Fein, 1981). Nevertheless, research documented R&T as being a distinct category of behaviour that is separate from aggression (Blurton-Jones, 1976; Sutton-Smith, 1986). Pellegrini's research indicates that

R&T play breaks down into aggression in less than 3 % of all cases and consumes less than 11% of all playground activity (Pellegrini & Smith, 1998; Pellegrini, 1987). In sum, these findings provide a rationale for considering superhero play as a special type of rough and tumble play. Superhero play is considered as a physically active type of play that includes running, climbing, chasing, play fighting. Adults often show ambivalence towards this type of play, with concern directed towards the level of physical activity as well as the potential for harm. Is there cause for concern, and if so what role does the media play?

Television and violence. Throughout the literature a common theme emerges suggesting that television violence, as well as computer, and video games are a major concern in superhero play. It appears that a heightened concern among adults, teachers and the early childhood community revolves around the fact that children's superheroes are depicted as violent crime fighters. There is a common link between good and bad in superhero play and the superhero is always portrayed as good, regardless of the measures he/she uses to save the day. In addition, the superheroes are in the majority of cases depicted as male characters and television programming depicts that the superhero must engage in violent acts in order to win. Further, the superhero is always right regardless of the violent acts and the pain he/she may inflict upon his/her enemy. According to Levin (1995b), children are growing up encountering enormous amounts of violence. Simmons, Stralsworth and Wentzel (1999) concur that television watching has become the central activity in most North American homes. According to statistics, 98% of households in the United States have at least one television set. Further, statistics indicate that approximately 7.5 hours of television is watched per day (Asamen & Berry, 1993). Moreover, Waters (1993) found that 82% of the programs children watch contain at least some violence. In

addition, programming of superhero shows continue to emerge with at least 32 violent acts per hour. These statistics may be the driving force behind many of the concerns adults express about superhero play. Parents and educators fear that children who watch these superhero shows and engage in superhero play will become violent and aggressive in play (Carlsson-Paige & Levin, 1990).

The violence that children are exposed to through the entertainment media has increased steadily since the deregulation of the broadcasting industry of children's television programming in 1984. Since the deregulation it has become possible for television shows and lines of toys to be marketed together (Kline & Pentecost, 1990). Therefore, television took on a new role and programming is designed to sell toys and other products to impressionable young children (Levin, 1995a). For example, the Mighty Morphin Power Rangers has become a big success on the television charts as well as the retail sales charts. Power Ranger toys and products surpassed \$1 billion in sales in 1994. The Power Rangers are considered by some as a pinnacle in the marketing of violence to children (Levin, 1995a). The Power Rangers show has more acts of violence than any of their predecessors such as Mutant Ninja Turtles, and GI-Joe with more than 200 violent acts per hour (Levin & Carlsson-Paige, 1995b). The Power Rangers differed from their predecessors not only in the heightened amount of violence, but also in the use of interspersed footage of real life actors and settings with cartoon characters. A key concern is that these characters may be seen as role models and may be confused with real people by young impressionable audiences.

Despite the lack of conclusive evidence concerning the effects of superhero play on children's imaginative play, many educators and parents continue to show concern with regard to this type of play. Carlsson-Paige and Levin (1990) posit that children who

are avid watchers of violent animated cartoons and television programs are being exposed to a serious risk—the risk of being unable to decipher fact from fantasy. Many children watch these shows and believe that they are being exposed to the real world; that is, in order to conquer the enemy one must use violent tactics and aggressive acts (Beckman, 1997). The main concern is that children will imitate their favourite superheroes through their make-believe play disregarding the fact that using aggression to resolve conflict is not an appropriate strategy (Boyatzis, 1997).

By watching others (superheroes) being aggressive, children are believed to learn new forms of hostile and dangerous behaviour (Bandura, Ross, & Ross, 1963). In Bandura et al.'s (1961) classic study participants exposed to the aggressive model reproduced a great deal of imitative behaviour. Thus, the major concern of the theorists who follow social learning theory fear that by watching others being aggressive (superheroes) children will become desensitized towards violence and be more tolerant of real-life aggression. It is important to mention that this study was a one time study, therefore the researchers failed to control accurately for other factors such as age, novelty effects, temperament, and background. The study focused on the children's imitative qualities following an aggressive act, therefore it is highly possible that being placed in such a novel situation the children would imitate the aggressor. However, the question remains as to what long-term affects did this study really have on the children? Bandura et al. (1961) failed to address this question.

Further studies conducted on superhero play have continued to focus on aggressive and violent actions that are believed to be associated with this type of play. Boyatzis, Matillo, Nesbitt, and Cathey (1995b) surveyed parents of school children in regards to

their viewing habits and parents' beliefs about the Power Rangers. This study also included teachers' ratings of children's aggressiveness and altruism. The results indicate that the more the girls watched the Power Rangers the more aggressive they were rated by parents and teachers. In regards to the boys, the authors reported that their correlations were in the "expected direction" but not significant. Another study by Levin and Carlsson-Paige (1995a) conducted a national survey where they elicited the responses of teachers concerning their experiences with the Teenage Mutant Ninja Turtles in their classrooms. The results of the questionnaires indicate that 89% of the teachers mentioned negative effects on behaviour and interpersonal relations, specifically an increase in aggression and rough behaviour.

Educator/parent view of superhero play and gender. Further research has been conducted, which sheds light on the possibility that teachers may have misconceptions concerning the actual nature of violence and play. Studies pertaining to teachers' views of aggression and playful behaviour offer two lines of evidence, which may support Boyd's argument. The first is that evidence suggests that children and teachers have differing perspectives on play fighting and aggression. Smith and Lewis (1985) indicated that teachers rely on some perspectives not shared by children to differentiate between aggression and play (in Boyd, 1997). Secondly, Connor's (1989) study suggests that teachers' perspectives often differ not only from children's perspectives but also from other nonteaching adults including teachers-in-training. Teachers tend to see behaviour as aggressive rather than playful more often than nonteachers. This suggests that teachers' reports of the occurrence and nature of superhero play may not be accurate nor objective and may in fact be associated with an inflated estimate of this behaviour (Boyd, 1997). Further, teachers often cannot distinguish between what is aggression and what is R&T

play. Many educators equate quiet with good, thus once the noise begins to escalate the play is halted. In addition, Smith and Lewis (1995) showed videotapes of play episodes to preschool children, educators and teachers-in-training. The results indicated that children were more likely to agree with each other or with an objective observer than with their teachers in assessing behaviours as being playful or aggressive, hence, illustrating that teachers often rely on perspectives not shared by children or other adults (Smith & Lewis, 1985).

Another area of study by Connor (1989) examined the role of gender in teachers' understanding of play and aggression. The findings suggest that men were more likely to view behaviour as playful and women were more likely to label behaviour as aggressive. Therefore, these findings imply that gender plays a role in teachers' understanding and meaning of aggression and play. These investigators also deduce that perhaps a reason why teachers prefer to ban superhero play in the classroom is because they need to ensure safety and control and this leads them to strive to minimize potential disruption and physically active play (Connor, 1989).

A final finding of Connor's (1989) research indicated that gender socialization may influence how teachers of young children view superhero play. Women may grow up with less desire or opportunity to engage in superhero play as opposed to men who engage in a great deal of physically active play, thus, implying that women may be less accepting of such physical types of play and may believe that such rough play is dangerous. Females may withdraw from R&T and other physically active types of play initiations as they react differently than males to tactile stimulation (DiPietro, 1981; Humphreys & Smith, 1987). Also, the physical vigour and roughness involved in superhero play typical of boys' play groups seem to be important factors for why girls segregate themselves from boys' play

groups (Maccoby, 1988). One may conclude from the leading evidence or lack thereof, that there is too little information about the importance or potential harm of such fantasy play to remove it from classrooms or discourage children from engaging in it. Evidence brought forward by Connor (1989) indicates that early childhood educators as well as adults in general, may be overreacting to superhero play because of their fears about an increasingly violent society and because of gender bias concerning this type of play. A debate has emerged between educators and theorists who believe that this type of play should be banned and those who posit that this type of play is beneficial for children (Greenberg, 1995; Gronlund, 1992; Levin & Carlsson-Paige, 1995b). However, one message that emanates from all literature concerning superhero play is that there are no clear answers concerning the effects that this type of play has on preschool children.

The studies that have been conducted on superhero play seem to focus solely on the effects of particular shows and their associations with aggressive play. For example, Kaplan (1998) investigated whether children who watched the Power Rangers would engage in aggressive acts. His experimental study included children between the ages of five and eleven years, and his sample size was fifty-two children (26 boys, 26 girls) assigned to either the control or the experimental group. The control group did not have any exposure to the Power Rangers, whereas the experimental group was exposed to an episode of the Power Rangers and children were observed in play groups for aggressive acts. Children who watched Power Rangers committed seven times more aggressive acts than those who did not. This study appeared to overlook the positive effects of superhero play because the author did not report on the long-term permanent effects of viewing the Power Rangers, nor did he discuss the difference in age between the participants (a fairly large age bracket), or any of the possible extenuating factors such as temperament, the

novelty of the situation, or background. This study focused on one type of superhero show and was biased against reporting any of the positive benefits that this type of play may have evoked.

A similar study was conducted by Boyatzis, Matillo, and Nesbitt (1995a) where they assigned children to either the experimental group or control group. The experimental group was shown an episode derived from the Power Rangers and the control group was only observed for their play episodes. The experimental group was observed prior to the viewing of the episode and the following day. Both groups of children were observed during their play with peers and the investigators recorded the number of aggressive acts. The results indicated that after watching only one episode of the Power Rangers, boys committed aggressive acts seven times more frequently than did the control children. They were reported to be using karate chops, flying kicks against peers in direct and obvious imitation of the Power Rangers. Once again these findings are questionable. The children were placed in extreme situations and were observed only for direct imitation of the Power Rangers. Another problem was the definition of the term aggressive act; what the adult may term aggressive could be considered physically active play by another. Furthermore, the results were inconclusive and they did not measure that superhero play was aggressive; this study measured children's imitation skills immediately after children watched specific shows.

In sum, the literature on child development and superhero play appears to have received little empirical attention, hence, creating uncertainty about the theories on the developmental functions of superhero play. Further, studies that have been conducted to date fail to provide children with opportunities to engage in superhero play with the use of superhero materials (Carlsson-Paige & Levin, 1990; Boyatzis et al., 1995b; Boyd, 1997).

Limited observation studies have been conducted on the use of superhero toys and children's play without the direct influence of television. Questionnaires that have been given to teachers (Carlsson-Paige & Levin, 1990) as well as parents fail to examine the topic of superhero play from an objective manner. Furthermore, the majority of researchers except for Boyd (1997) have failed to make any connection between superhero play and the heavily debated rough and tumble play. This is an important connection that has been overlooked and provides a rationale for the present study of the effects of superhero materials on the quantity and quality of boy's physically active and imaginative play.

The Present Study

Popular culture appears to be a key feature of leisure interests of many children, and these interests are manipulated to a certain extent by the media and toy manufacturing industry. Children appear to be attracted to the television programming, Disney movies, and are tempted by the potent lure of commercialized toys and literature (Marsh, 2000). This commercialized vehicle that attracts young children does, however, serve as a rich source of imaginative play (Clark, 1995). A central commodity of this popular culture universe are the superhero figures such as Batman, Superman, Spiderman, X-Men, and Power Puff Girls, which are so often intertwined with children's pretense. According to Marsh (2000) children appear to have a desire to explore the world in terms of its bipolar extremes: good and evil, male and female, and right and wrong. Taking into account the influence of the media and the mass production of media imbued toys, do superhero materials linked with television and film-related narratives influence boys' physically active and imaginative play?

“In making use of popular and traditional cultural symbols (like Superman or Cinderella), children may position themselves within stories that reveal dominant ideological assumptions about categories of individuals and the relations between them (Dyson, 1994, p.472).

There is a need for observational research pertaining to the purpose of superhero play. Empirical data needs to be collected in order to evaluate effectively the possible benefits and disadvantages of this type of play. The majority of the literature, as well as previous research, addresses violence projected by television programming and its effects on children's superhero play. Literature on superhero play is limited, perhaps because research has focused more on the negative effects of aggressive play than on the actual behaviour or on potentially positive aspects (Goldstein, 1994). However, currently there is not enough valid data on the effects of superhero materials on children's fantasy play to draw any conclusions about the value of this play. To bridge the apparent gap in the literature, the present study investigated the influence of superhero vs nonsuperhero materials on boys' physically active and imaginative play. The dyads consisted of boys between the ages of 4 – 5 years, who participated in two play sessions, superhero and nonsuperhero. The present study triangulated the data sources to achieve greater reliability and validity of results. By collecting data from the teacher, adult, and the child's point of view, the researcher was able to take into account all the different point of views.

The present study was designed to examine the influence of superhero materials (character toys derived specifically from television or film superheroes and nonsuperhero characters) on the frequency and quality of boys' physically active and imaginative play. More specifically, the study focused on the frequency of superhero play and the themes and roles enacted in this type of play, as well as the level of physical activity associated

with play in 4- to 5-year-old male dyads. Boys between the ages of 4 - 5 years were considered, because preschool children are at a peak level of interest in symbolic play as described by Piaget (1962). Furthermore, the frequency of object transformation has been reported to follow a curvilinear trend from ages 3-6 peaking at around age 5 and declining thereafter (Cole & Lavoie, 1985; Field, Destefano, & Koewler, 1982). The rationale for choosing male dyads was based on previous literature that indicated that children appear to play longer in same-gender groups and with same gender-preferred toys (Huston, 1983; Rubin et al., 1983). In addition, the male gender was also chosen based on the fact that boys are considered to exhibit more enjoyment in fantasy play, as well as engage in higher levels of fantasy play than their female counterparts (Pulaski, 1973). Finally, males were chosen as participants because they have been described as being more physically active in their play, as well as engaging in more rough and tumble play (Pulaski, 1973; DiPietro, 1981; Pellegrini & Boyd, 1993).

Considering the extant data that orbits around the negative effects of superhero play in the preschool years and the cause for concern of imitation of violent acts on television shows and movies, it is pertinent to explore superhero play (Bandura et al., 1963). Among preschool children the most popular programs are situation comedies and cartoon shows (Lyle & Hoffman, 1971a). Taking into account the interests of children between the ages of 4 - 5 in cartoon characters and the superheroes that ensue, research now needs to focus on the materials used in superhero play and the effects they may have on young boy's pretense. Some authors have expressed different views regarding the general effects of television violence. Feshbach and Singer (1971) suggest viewing television violence provides opportunity for the discharge (catharsis) of aggressive feelings and thus reduces the likelihood that the viewer will engage in aggressive or

violent behaviour. This view advocates the need for children to engage in various roles and themes through superhero play.

Rather than considering particular superhero shows, or focusing directly on the aggression, this study maintains that superhero play is a specific type of rough and tumble play, which elicits a great deal of physical activity. Toys served as a pivot for the child to embark upon fantasy play in close conjunction with their superhero of choice. Toys associated with television or film characters were termed as “superhero toys”, as they are often associated with particular superheroes recognized by avid television watchers. Toys that are unrelated to a specific television or movie characters were termed as “nonsuperhero toys”, as these toys are not related to any characters targeted through the mass media. The superhero toys assisted the child to associate and engage in superhero play. The toys labelled nonsuperhero toys enabled the child to develop themes that delve deeper into the human realm. For the purpose of this study the researcher maintained that the average preschooler was familiar with television and movie characters as well as superhero toys. In light of the evidence, the researcher also contends that boys have been exposed to various types of toy paraphernalia (Rubin et al., 1983).

The measures of frequency of superhero pretense, types of superhero roles, and variety of themes, as well as levels of physical activity were based on observations of the dyads engaged in pretense with both superhero and nonsuperhero materials. Boys were placed in dyads based on their preferences for play partners. The dyads were videotaped in a space that permitted for ample physically active play.

It was hypothesized that:

1. Taking into account the findings that boys prefer fantastic games as opposed to familial roles (McLoyd, 1983), it was predicted that the participants would engage

in a higher number of fictive roles when provided with the superhero toys than nonsuperhero toys. Hence, it was advanced that children who were given superhero toys would engage in more fictive/character roles as opposed to when children were provided with nonsuperhero toys.

2. As revealed in Pulaski's study (1973), more varied themes and fantastic roles were elicited by minimally structured materials as opposed to highly structured toys. Considering the research of Quiltich and Risley (1973) that play and language tend to follow themes suggested by toys or props themselves, it was predicted that (a) there would be a higher number of themes, and (b) a greater variety of themes observed in play with nonsuperhero toys. Hence, it was predicted that the superhero toys would follow superhero themes because of the structure of such toys, consequently resulting in less varied themes.
3. Taking into consideration that boys display frequent playful physical activity including wrestling, jumping, and shouting (Hines & Kaufman, 1994), it was expected that the dyads would be involved in higher levels of physical activity when they were engaged in superhero play. Fein's (1989) research indicates that physically active play of children between the ages of two and four accounts for only 10% of all day care behaviour. However, when engaged in superhero or rough and tumble play boys are recorded as showing higher levels of physical play, higher levels of wrestling, higher levels of physical assault on objects (DiPietro, 1981; Maccoby, 1988) than their female counterparts.
4. Considering Carlsson-Paige and Levin's (1983, 1990) argument that children use television-based toys to imitate television images and behaviours as well as, the heavy influence that television has on young viewers; it is expected that the more

television that children watch the more superhero roles and themes they will engage in during the superhero condition. Further, it was expected that the more television viewed, the more the dyads would engage in superhero roles and themes, considering the fact that children are watching more television than ever before (Singer, 1983).

Method

Participants

Fifty-eight children who attended one of 12 English-speaking day cares located in a middle-income area of the metropolitan Montreal area participated (population = 3, 000, 000). The children were between the ages of 4 and 5 years ($M = 54.95$ mos., $SD = 5.28$ mos.) and attended day care on a full time basis. On average, the children (46.6%) were first borns and (46.6%) were second borns. A large number of the participants had at least one sibling (70%). The majority of the sample was born in Canada (97%).

Fifty-eight parents whose children attended one of the 12 English-speaking day cares listed above participated. The parent questionnaire (Appendix D) consisted of eight demographic questions pertaining to parents' country of origin, languages spoken at home, years of education. The parents' level of education was significantly high ($M = 4.10$, $SD = .79$) with a minimum of four years post-secondary training. The participants were predominantly mothers (80%), who came from bi- or trilingual households (47%) and spoke English, French, and another language. The participants have completed on average five years post-secondary education (34.5%). The majority of the participants (81%) were born in Canada.

Eighteen preschool educators from one of the 12 English-speaking daycares listed above participated in the study. The participants were largely composed of female

educators (94.4%). The teacher questionnaire (Appendix E) consisted of four demographic questions pertaining to educators' level of training, years of education, mother tongue, and country of origin. The teacher level of training for the most part was composed of a collegiate degree and 66.7% had at least a DEC. A large percentage of participants (72.2%) had at least 3 years post-secondary education. Half (50%) of the participants' mother tongue was English, while 38.9% spoke a language other than English or French. Also, a high percentage of educators (77.8%) were born in Canada.

Materials

The materials used for this study consisted of 22 figurines. Eleven of these figurines were classified as superhero such as Batman, Spiderman, and Power Puff girls (see Table 1) (All tables are found at the end of the results section). The remaining eleven figurines were classified as nonsuperhero (non-media related figurines); for example, female dolls and dollar store characters were used. The two toy conditions were balanced in order to provide for the same number of figures and types of figures. Specifically, the superhero toy "Spiderman" was matched with a comparable nonsuperhero character in terms of size and similar features. The superhero toy selection used in this study was chosen based on the children's general familiarity with popular television characters. The nonsuperhero selection was formulated by choosing toy characters that were similar in size and features to the superhero of choice but were not popular television characters.

Procedure

The researcher contacted directors of English-speaking day care centers in the Montreal area and asked for permission to recruit 4 - 5 - year - old children. A letter explaining the study was presented to the Director (see Appendix A) and a meeting was arranged to answer any questions or concerns. Once permission was obtained, the

classroom teacher was approached and informed of the study (see Appendix B). Once the teacher agreed to participate, the researcher then contacted the parents through a letter, which was sent home with the children (see Appendix C). This letter explained the research and the general topic, goals, and detailed procedure of the present study. Parents were also sent home a permission form concerning acceptance or refusal to participate and any possible ethical concerns related to this study (see Appendix C). Along with the permission form, parents were also sent a short questionnaire that addressed information about their child's play preferences, materials played with at home, and whether they participated in physically active play at home, and hours of television watched (see Appendix D). The parent/guardian was asked to return the consent form along with the questionnaire in a white envelope (provided by the researcher) to the classroom teacher. The researcher was available, by phone, for any possible questions that the parents may have had.

Once the forms were returned to the researcher, the classroom teacher was then asked to fill out a short questionnaire pertaining to his/her beliefs on superhero play in the classroom (see Appendix E). The teacher questionnaire focused on the educator's beliefs about superhero play, the frequency of its occurrence in the classroom, items available for children within the classroom, and levels of physically active play allowed in the classroom. Once permission was obtained, the researcher visited each classroom in order to familiarise herself with the setting as well as to build rapport with the children.

In order to place the children in dyads, the researcher then implemented a reliable sociometric measure for preschool children (Asher, Singleton, Tinsley, & Hymel, 1979), which used peer nomination as the method of placement. This format of peer nomination has been extensively used in behavioural and sociometric studies (e.g., Hartup, Glazer, &

Charlesworth, 1967; Olden & Asher, 1977; Rubin, K.H., Bukowski, W., & Parker, B., 1998) The boys who had been given parental consent from each daycare met with the researcher individually in order to participate in the sociometric measure. Each boy was provided with a photograph of the participating males in his classroom and he was asked to place the photographs of his peers in one of three boxes: (a) a happy face; (b) a neutral face, or (c) a sad face, according to how much he liked to play with that person. The dyads were selected based on the results received from the rating scale measure. Boys were placed in dyads based on reciprocal choices. Specifically, each child in the dyad had to nominate the other as someone he liked to play with a great deal (happy face). This ensured that the dyads were composed of boys who liked each other and were likely to engage in play together. The children then participated in two play sessions lasting eight minutes each. The play sessions transpired on the same day and were filmed consecutively. These play sessions, as well as the teacher and parent questionnaire, were conducted in January-May 2003.

The data collection phase of the present study took place in a private setting within each of the 12 day care centers. The toy conditions were presented to the dyads within the classroom setting and were videotaped to record for types of roles, themes as well as level of physical activity, and aggression. Each dyad was brought from their classroom to a private playroom within the early childhood setting. The researcher then confirmed the children's desire to participate by asking them orally for consent. The dyad was then asked to sit on the floor beside one another and the video camera was installed on a tripod in front of them. The dyad was reminded that they were to be videotaped but that only the researcher would have access to these tapes. They were also told that they could return to their classroom at any time. The dyad was then asked to participate together in a

familiarisation (warm-up) session, which consisted of an open-ended game (farm set) for five minutes in order to assure that the children were relaxed enough with the procedure as well as the video camera. Once the children appeared to be at ease with the surroundings and the task at hand (approximately 5 minutes) the observations commenced (see Appendix F for verbatim instructions). The researcher asked the dyad to say their names out loud and to repeat their group number (provided to them by the researcher). The room dimensions (approximately 15 ft x 15 ft) permitted ample space for the activity.

The superhero toy condition consisted of 11 superhero characters (see Table 1). The superhero characters were placed on the floor in random order for the children to play with and the dyad was told that they could choose any of the toys to play with, however they were asked to stay on the opposite side of the camera. The children were free to manipulate the toys in their play. However, they were reminded to play safely and to share. The dyad was videotaped for a period of 8 minutes per play session. Previously, the warm-up and both play sessions had been pilot-tested and 8 minutes gave ample opportunity for the children to engage in play. The toys were presented in a counterbalanced order, hence the first dyad was provided with the superhero toy condition and then the nonsuperhero toy condition. Following the first session, the experimenter replaced the presented toys with the play materials from the second condition. The second toy condition was nonsuperhero toys and consisted of 11 nonmedia related characters. The nonsuperhero toys were placed in random order on the floor for the children to play with them. If at any time during the play sessions the children became aggressive, the researcher intended to intervene, however, this did not occur. Once the dyad had been exposed to both toy conditions, the researcher thanked the children for their participation

and then accompanied them to their classrooms. Based on the observations of videotaped sessions, children's play and nonplay behaviours were scored.

Measures and Coding

Parent/guardian's questionnaire. The children's parents/guardians were asked to answer a short questionnaire regarding the general demographics of the family (e.g., number of children, level of education) as well as personal questions about the child such as amount of television watched per week, favourite shows, and types of play materials (Appendix D). This measure was used to develop a deeper understanding of the children's play preferences, level and type of physical play activity at home, as well as their opinions about impact of television viewing on play. The demographic questions consisted of eight questions and the personal play preferences section consisted of 11 questions

Teacher questionnaire. Each child's teacher was asked to fill out a short questionnaire regarding his/her personal beliefs about superhero play in the classroom, the frequency of its occurrence, items available for children in the classroom and the levels of physically active play (Appendix E). This questionnaire was used to develop a deeper understanding of the educators' beliefs of superhero play and its significance in the early childhood curriculum. The demographic questions consisted of four questions (level of training, number of years of education), and the remaining six questions focused on play materials and beliefs concerning physically active play.

Types of roles enacted. Once the videotaping of the dyad interactions was complete, types of roles enacted were coded according to categories derived from Garvey and Berndt (1975) and McLoyd (1983) (see Appendix G). A frequency count was used in order to record one role for every 15-second interval per play session (see Appendix K for coding scheme). This measure was used to assess the number of different roles assumed

by the children during their pretense using categories derived from Garvey and Berndt (1983) and McLoyd (1983). The types of roles enacted included: (a) functional roles organised by object or situation; (b) familial/relational, or roles such as mother/child or father/mother; (c) character/fictive, or stereotype roles such as fireman or fictional such as Spiderman; (d) peripheral, or roles that were discussed by the child but not enacted such as imaginary friend; (e) occupational, or roles enacted related to a profession such as a teacher; (f) other/exploration or negotiation of roles, and (g) no role (see Appendix G for description of roles).

Variety of play themes. This measure assessed the type of theme the dyads engaged in, as well as the variety of themes throughout the play sessions. After having videotaped the dyadic play interactions during both play sessions, the variety of themes enacted were coded according to categories derived from Garvey and Berndt (1983) and Carlsson-Paige (1990) (see Appendix H). A frequency count was used in order to record one theme every 15-second interval per play session. This measure assessed the number of different themes or transformation of situations either through enactment or story telling (see Appendix K for coding scheme). The types of themes enacted included: (a) nurturing/caring, or caring for an infant or pet; (b) domestic/housekeeping, or a father figure or house cleaning theme; (c) action/battling/averting threat or danger, or war themes, fighting against the enemy; (d) building, or construction site theme; (e) performing, or an artist, singer, or dancer; (f) capture and rescue, or police and robber; (g) submit or vanquish, or a villain relinquishing or defeating power; (h) attack or flee, or soldier in battle using force to succeed or escape from danger; (i) other/exploration and negotiation, and (j) no theme. This measure assessed the type of theme the dyad engaged in as well as the variety of themes throughout the play sessions.

Level of physical activity associated with play. After having videotaped the dyadic play interactions during the play sessions, the level of physically active play was coded using a rating scale to record for the level (see Appendix I). This measure assessed the level of physical activity that the children engaged in on a scale of 1-5; 1 = no physical activity, 2 = low physical activity, and 3 = moderate physical activity, 4 = frequent physical activity, and 5 = high physical activity (see Appendix K for coding scheme).

Frequency of physical and verbal aggression. The videotaped dyadic play interactions were coded for the frequency of physical and verbal aggression using a frequency tally. A tally was also calculated for the use of war materials such as guns and swords. Aggression was operationally defined as either (a) verbal: speaking or yelling in an insulting or threatening manner with the intent to harm; or (b) physical: hitting, shoving, kicking, tripping other children, with intent to harm. Aggression could center on objects, such as throwing objects at each other, or taking objects from another child without their consent. Behaviours that were recorded as accidents and unintentional were not considered as aggression (see Appendix J).

Qualitative Coding

In order to analyse the findings of the qualitative data obtained from both the parents and educators, the researcher used an open-ended coding method. The researcher formed initial categories of information about the phenomenon being studied by segmenting information (Creswell, 1998). From this information the researcher then within each category, investigated several subcategories that emerged from the initial sections. The researcher continued to do this until the data were saturated, therefore once no new themes surfaced the researcher then began to formulate the final sections from which conclusions were drawn.

Verification of qualitative coding. In order to ensure verification in the qualitative data the researcher employed a triangulation method. That is, the researcher used multiple sources, methods and theories to provide corroborating evidence such as observations, time sampling, frequencies, and questionnaires. According to Creswell (1998), this process of corroborating evidence enables the researcher to ensure validity. A peer review was also employed, which provided an external check of the research process. An independent coder unfamiliar with the purposes of the study reviewed the information in order to ensure that the researcher was avoiding any bias in the coding scheme. Finally, external audits were used in order to permit an external peer to examine both the process of the coding and the product of the qualitative conclusions. This second coder was responsible for verifying 50% of the teacher responses and 25% of the parent responses. Disagreements were resolved by discussion to arrive at consensus.

Interrater Reliability.

The primary researcher, along with an independent coder who was unfamiliar with the purposes of the study, conducted interrater reliability for coding of the themes, roles, level of physical activity, as well as for aggression acts. Five of 29 dyads (25%) dyads were used for the purpose of reliability. The interrater reliability percentages of agreement were calculated by computing the sum of all agreements divided by sum of agreements and disagreements. The percentages for the coding were: coding of roles (85.6%), coding of themes (84%), coding for level of physical activity (83.4%), and coding for aggression (96.4%). An overall strong Cohen's *kappa* was calculated across the 29 dyads ($k = .84$), which indicated that the researcher achieved high reliability.

Results

The results of the study are presented in the following order: (a) preliminary data considerations, (b) quantitative analyses of hypotheses, (c) parent quantitative and qualitative data analyses, and (d) teacher quantitative and qualitative analyses.

Preliminary Data Considerations

Data were collected from three different sources (i.e., parent, teacher, child). The data were verified for proper recording, as well as any missing data. In the case of missing values, the mean for the appropriate column was used to replace the value. This study was a triangulation mixed method design due to the fact that the data were derived from multiple levels, the parent, teacher, and the child. This method enabled the researcher to simultaneously collect both the quantitative and qualitative data, merge the data, and use the results to best understand the research problem. The independent variables were the toy conditions (superhero and nonsuperhero); the dependent variables were the types and amount of imaginative play (roles, themes) and level of physical activity. Results for children's play will be presented in the following order: (a) descriptive statistics; (b) analyses of hypotheses; and (c) additional analyses.

Descriptive Statistics

Means and standard deviations for the roles and themes are found in Tables 2 and 3. The means and standard deviations for aggression are found in Table 4 (All tables are found at the end of the results section).

Hypotheses Analyses

Hypothesis 1: Roles in the superhero and nonsuperhero conditions. This hypothesis predicted that a higher frequency of character/fictive roles would occur in the superhero toy condition than in the nonsuperhero toy condition. That is, there would be

more frequent occurrences of character/fictive (Spiderman, batman) roles in the superhero toy condition.

In order to test for this hypothesis, paired sample *t*-tests were conducted (see Table 2 for descriptive information) between the fictive/character roles with superhero and nonsuperhero toys (see Table 5 for *t*-tests). The independent variables were the toy conditions; superhero and nonsuperhero. The dependent variables were the roles that the dyads engaged in during the play sessions. Findings showed that there were significant differences between the superhero and nonsuperhero condition with respect to character/fictive roles. Specifically, in the superhero condition children engaged in more character/fictive roles than in the nonsuperhero condition. Significant differences were also detected in the familial/relational role between the two conditions. There were more familial/relational roles present in the nonsuperhero condition than the superhero condition. In addition, data also indicated a significant difference in the occupational role and a greater number of occupational roles occurred in the nonsuperhero condition than the superhero condition. A significant difference was also found in the frequency of the exploration/negotiation role, specifically in the nonsuperhero condition children spent more time exploring and negotiating roles than in the superhero exploration role. A significant difference was also found in the no role category; it appeared that children engaged in no roles more frequently in the nonsuperhero condition than they did in the superhero toy condition. Further *t*-tests indicated that there were also trends detected between the superhero and nonsuperhero peripheral roles. It appeared that peripheral roles occurred more frequently in the nonsuperhero condition than the superhero condition. Findings indicate that the functional role was not significant, however this role occurred

more frequently in the nonsuperhero condition than the superhero condition. In sum, findings from the study supported hypothesis 1.

Hypothesis 2: Themes in the superhero and nonsuperhero conditions. This hypothesis stated that there would be (a) a greater frequency of themes observed in play with the nonsuperhero toy condition than with the superhero condition. That is, that dyads engaged in the nonsuperhero condition would participate in a higher number of themes, and (b) a greater variety of themes. To test hypothesis 2 (a), a series of paired sample *t*-tests were conducted (see Table 3 for descriptive information) between superhero and nonsuperhero themes (see Table 6 for *t*-tests). Findings showed that there were significant differences between superhero and nonsuperhero conditions in the building theme. More frequent occurrences of the building theme were apparent in the nonsuperhero condition than in the superhero condition. Next, a trend was found in the nurturing/caring theme between the two conditions. Findings indicated that there was a greater occurrence of nurturing/caring themes in the nonsuperhero condition than the superhero condition. A second trend was found for the domestic/housekeeping theme. Once again, findings indicated that the dyads engaged in more domestic/housekeeping themes in the nonsuperhero condition than in the superhero condition. The remaining *t*-test comparisons between the two conditions for the action and battling, performing, capture and rescue, submit and vanquish, attack and flee, exploration/negotiation and no theme were not significant. Therefore, there were no significant differences between the superhero and nonsuperhero conditions on the following themes: action and battling, performing, capture and rescue, submit and vanquish, attack and flee, and exploration and negotiation.

To test for hypothesis 2 (b) the sums of the variety of themes for each dyad were calculated for both conditions. From the sums, a series of paired sample *t*-tests were

conducted (see Table 7) between superhero and nonsuperhero variety of themes. Findings indicated that there was not a significant difference between the two conditions and boys did not engage in a greater number of themes in the nonsuperhero condition than the superhero condition.

Hypothesis 3: Physically active play in the superhero and nonsuperhero conditions. This hypothesis predicted that the dyads in the superhero condition would exhibit higher levels of physically active play than in the nonsuperhero toy condition. That is, the dyads provided with the superhero toys would be more physically active than in the nonsuperhero condition where they would be expected to engage in lower levels of physical activity.

To analyse the level of physical activity between the superhero and nonsuperhero conditions, a comparison of total scores for physical activity in both sessions was tested with a paired samples *t*-test (see Table 8). The results of the *t*-test showed that the difference between the two conditions was significant, however, the difference did not support the hypothesis. Rather, the results showed that the level of physical activity was higher in the nonsuperhero condition than in the superhero condition. Specifically, this indicated that the dyads engaged in higher levels of physical activity with the nonsuperhero toys than with the superhero toys.

Hypothesis 4: Television viewing and superhero and nonsuperhero roles and themes. This hypothesis predicted that roles and themes exhibited by the dyads would be positively correlated with the hours of television they viewed. Therefore, it was expected that the more hours of television that the children watched the more superhero roles and themes that they would engage in.

First, a dyadic score for the amount of television viewing was created by calculating an overall sum of hours for each dyad by combining the parents' reports on hours of television watched per week. Second, to analyse the relationship between hours of television watched and the frequency of roles and themes the dyads engaged in, a Pearson correlation was conducted in both conditions (see Tables 9 and 10 for correlation of roles and themes). The findings for superhero roles indicate that there were no significant correlations between any of the roles (i.e., functional, familial/relational, character/fictive, peripheral, occupational, exploration/manipulation or no role) and hours of television watched.

Findings in the nonsuperhero condition role indicated that there was a significant negative correlation between hours of television watched and functional roles that the children engaged in (see Table 9). This suggested that the more hours of television watched the less the children engaged in functional roles or vice-versa. Another significant negative correlation was found between hours of television watched and number of peripheral roles that the children engaged in. This correlation suggested that the more hours of television watched, the less the children engaged in peripheral roles or vice versa. A final positive correlation that was found was between hours of television watched and no role. This indicated that the more television the children watched the more they would engage in no role in their play or vice-versa. Finally, a positive trend was found between nonsuperhero character/fictive roles and the hours of television viewed. It appeared that the more hours of television viewed, the more children engaged in character/fictive roles or vice-versa. The remaining roles: familial/relational, occupational, and exploration/manipulation were not significantly correlated with television viewing as reported by parents.

For the analyses on the frequency of themes and television viewing see Table 10. In the superhero condition the hours of television watched were negatively correlated with the building theme. This indicated that the more hours of television watched, the less the children engaged in the building theme or vice-versa. A second, negative correlation, was found between hours of television viewing and the capture and rescue theme. This suggested that the more television children watched, the fewer capture/rescue themes they would engage in or vice-versa. The remaining themes: nurturing/caring, domestic/housekeeping, action/battling, performing, submit/vanquish, attack/flee, exploration/negotiation, and no theme were not significantly correlated with television viewing.

In the nonsuperhero condition, a positive significant correlation was found between the attack/flee theme and television viewing. This indicated that the more children watched television, the more they engaged in attack/flee themes or vice-versa. A negative trend was found between hours of television watched and the exploration/negotiation theme indicating that it is possible that the more television children watched, the fewer exploration/negotiation themes they engage in. The remaining nonsuperhero themes: nurturing/caring, domestic/housekeeping, action/battling, building, performing, capture/rescue, submit/vanquish and no theme were not significantly correlated with television viewing.

Additional Analyses

Physical and verbal aggression and use of aggressive play objects. Finally, the rate of physical and verbal aggression and the use of aggressive play objects were compared in the two conditions. The overall findings for level of aggression indicated that during both play conditions, superhero and nonsuperhero, no physical or verbal aggression

occurred (see Table 4 for descriptive statistics). However, the findings for use of aggressive play objects indicated that there was a low frequency of use of aggressive play objects in both the superhero and nonsuperhero toy conditions. A slightly higher number of aggressive play objects were noted to have occurred in the superhero toy condition than in the nonsuperhero toy condition. A *t*-test was conducted between the two conditions for use of aggressive play objects (see Table 11). The findings indicated that there was not a significant difference between the two conditions.

Parent/Guardian Questionnaire

Descriptive information. The second part of the questionnaire used frequencies in order to represent the analyses. Parents reported on average that the toys that children played with at home ranged from blocks, to cars, to outdoor equipment (see Table 12). It appeared that 48.3% of children played with blocks at home, while 74.1% of parents reported that their children played with Lego paraphernalia. A high number of children (75.9%) were reported to engage in play with cars and trucks, while 63.8% of children in the study were reported to play with a variety of superheroes at home. Pretend play figures (nonmedia related) occupied 53.4%, a moderate choice for young boys. Art materials appeared to be somewhat popular (65.5%), and construction toys were chosen as a moderate favourite (58.6%). Books seemed to play an important role in the lives of these young children as parents reported they were a frequent choice (74.1%). In terms of outdoor play, riding bicycles ranged from a moderate choice (50%) with outdoor climbing equipment being rated as more popular (62.1%)

Overall, parents were very open to permitting television characters (see Table 12) in the home. A high number of parents responded that they were allowed in the homes. The results also depicted that the majority of the parents who responded confirmed that

their child owned at least one superhero toy. A high score was received for play involving the use of television characters. It appeared that a little more than half of the sample of parents indicated that their children played with superhero characters in the home. Also noteworthy of mention, is the fact that the majority of respondents indicated that their children engaged in physically active play. On a scale of one to five; 1 indicating no physical activity, 3 some physical activity and 5 indicating frequent physically active play 43.1% of the sample indicated that their children engaged in physically active play sometimes, and 39.7% said that this type of play occurred frequently.

It was also indicated through the responses that more than half of the parents reported that their children played at home with both peers and alone, while 41.4% preferred to have a play partner. The results depicted that a moderate number of children watched approximately 0 - 6 hours of television a week (27.6%), 44.7% watched 7- 10 hours a week, while 13.8% watched 11 - 14 hours weekly. The remainder of the sample watched 15-21 hours weekly (6.8%). Children's favourite television programs indicated were reported to be nonsuperhero in nature (53.4%), while 36.2% were a combination of superhero and nonsuperhero, such as Spiderman and Mr. Dressup. When asked about favourite superhero programs that children enjoyed watching, 56.9% of parents reported that superhero shows such as Batman and Spiderman were the program of choice, while 12.1% reported nonsuperhero programs such as Bob the Builder and Barney.

Qualitative responses to parent questionnaire. When asked about their personal sentiments regarding superhero and other types of physically active play, parents reported a significant emphasis on safety. The number one concern for parents was the safety of their children-regardless of the type of play they engaged in. One parent reported, "as long as it is gentle and not hurting or yelling I don't mind." Another parent explained, "I think it

is fine up to a point (as long as it doesn't get aggressive) I intervene if I think someone might get hurt." It appeared that parents' biggest fear was that their child might get hurt or hurt their peers. As one parent said, "Boys have the energy and need to use it. I do not want however my child to be violent, hit etc. It is a fine line." Again, this parent emphasised the issue of safety. Another parent nicely summed up the issue at hand, "All active play is encouraged as long as he doesn't hurt himself or someone else. We have no guns or toys of that nature."

Many parents felt that superhero and physical play was a very healthy and important part of their children's development, "We encourage a certain amount-every night daddy wrestles with boys (they wrestle him!) but we are strict about ensuring that no one gets hurt-it is a great exercise and they have a lot of fun. We love them to climb and run and use their bodies when they play at least half of the time. Preferable out of doors." Some parents reported that superhero and physical play was an excellent way for children to develop fine and gross motor skills, "I think that it is normal for boys to engage in R&T and that it has some benefits (i.e., reading facial cues and learning about other perspectives) it does need proper supervision." This parent explained why she felt physical play was important in children's lives, "I believe it is important for boys to play rough as long as it is varied with other types of play. Good builds co-ordination and as long as no one gets hurt."

Another theme, which emerged from the responses to the questionnaire was that supervision was imperative if children were to engage in superhero play. For example, one parent stated, "I think as long as there is some supervision and limits its fine-no hitting etc." Another parent confirmed this idea, "It doesn't bother me, as long as the children don't get carried away and when this type of activity happens there is always parent

supervision." Supervision appeared to be a key factor in superhero and other forms of physically active play. Parents wanted to ensure that their children were safe and that they were not playing aggressively. Some parents believed that this type of play was acceptable at home and at school as long as there was the necessary supervision, "It's okay at home where we can monitor the child, it's also ok at school if the kids are being supervised not playing too rough."

It appeared that many parents had mixed emotions about superhero play. The concern for their child's safety was obviously prime in deciding if this type of play was permitted. As one parent said, "I do not appreciate a lot of rustle and bustle in play, however, other physical activity (running, jumping, etc) does not bother me, as long as the area is appropriate." This parent clearly voiced her mixed sentiments, by saying children "usually end up with someone upset but it is a great release of energy when you are stuck inside once in awhile." It appeared that there was a fine line between what parents viewed as being safe and what they allowed their children to do. Many parents discussed safety and supervision as being important factors in deciding how they allowed their children to play, however the fun aspect of the play also weighed heavily on their decision. This can be exemplified by this parent's comment, "I like physical play, I don't mind R&T in good environment, can get out of hand though. Still laughs a lot and all physical exercise is good."

Some parents felt that superhero play should be reserved for specific areas, "it has its time and place (outside or playroom). No problem with other physically active play (chasing dog/cat, sister, hockey, bicycle)." On the other hand, there were also those parents who believed that superhero play was just not an option, "I think that physically

active play such as sports is healthy but I don't like R&T play. I do not allow much R&T play-between the boys but pretend it is okay."

For the most part it appeared that the most noteworthy finding was that parents felt that this type of play was "normal". This parent explained, "It's great for them. He talks a lot about smashing and killing lately, which surprises us, as he doesn't watch a lot of television, but I understand it's fairly normal." Parents seemed to express the idea that boys will be boys and that superhero and physical play was part of a natural process of male development and exploration. As one parent stated:

I have an active boy who loves playing outside or having activities where he can measure his physical power. I don't have any objections regarding R&T as long as it's controlled: when to stop-how long. It seems that the boys find a satisfaction in that (a balance). We have to be there as parents and teachers. His father is good with the active part.

This parent also reinforced the belief that physical contact in play was a natural process in development by saying, "I believe that R&T play is a normal physical activity for any child. It is a very normal type of behaviour for boys at this age."

An interesting finding that resonated throughout the responses was that superhero play was a wonderful way to release energy for children, for example, "Boys will be boys, if in controlled environment it is an excellent way to let go the sillies." Parents stated that boys needed an outlet, namely a source where their energy could be invested and then released. It appeared that this source of energy release could be found in superhero play, "I think that boys need to have some time to let off steam".

In conclusion, parents indicated that physical and superhero play was a beneficial source of catharsis, because it enabled the child to release pent up energy, while

developing necessary skills. As long as children have some limits that are designated for them, coupled with supervision, then this type of play was encouraged by parents. It was imperative, nevertheless, to find a middle ground or a happy medium as this parent noted:

physically active play is essential; quiet play is also necessary. I discourage rough language, I am tolerant of some physical play, like mimicking karate or Judo moves as long as there is no contact. In our house we play tickle wrestle, with rules-stop means stop, no face contact.

In sum, parents advocated that superhero play and other forms of physical activity were essential for the healthy development of their children.

Teacher Questionnaire

Descriptive information. Frequencies were tallied for both the demographic as well as nominal data (see Table 13). In addition, there were also three questions based on a ranked scale. The remaining three questions were qualitative in nature and were coded for emerging themes and patterns.

In terms of responses to the nominal questions it appeared that most of children were permitted to engage in physically active play in the classroom (see Table 13). In fact, a remarkably high percentage of educators responded (83.3%) that there were items in the classroom that would elicit physically active play. Another question that teachers rated was the spacing location for physically active play and results indicated that a significant number of educators (88.9%) felt that physically active play should occur both indoors and outdoors. Only a small number (11.1%) indicated that it should occur only outdoors. Teachers were also asked to indicate the amount of physically active play in their classrooms. The two ranked scores (using a 5-point Likert scale) depicted that 55.6% of the educators stated that boys in their classrooms engaged in moderate amounts of

physically active play within the classroom, whereas a smaller percent reported that the children in their classroom engaged in physically active play frequently. The second question indicated that half of the teachers considered physically active play to be moderately to very important within the curriculum, whereas a small percent (38.9%) reported it to be very important.

Qualitative responses to the teacher questionnaire. The first qualitative question asked the educators if the children were permitted to engage in physically active play within the classroom and to explain why or why not. The findings for this question appeared to show that overall teachers were open to allowing children to engage in physically active play within the classroom. The teachers' main concern, however, was the safety of the children, "Yes, as long as it is not too rough and no one is getting hurt." Another consideration of the educators was that while allowing the children to engage in these types of play, they were concerned that the children might get hurt. The fear was that there was not ample space in most classrooms to permit for such active play as one educator stated, "Yes, however limited space. I try to accommodate and encourage." Another teacher also voiced a similar concern, "I don't have enough room. They play in the blocks corner." Some educators felt that this type of play should be permitted only outdoors where there was more room for movement and exploration, for example "physically active play is permitted and encouraged when we are outside (twice daily), as well as in our gym to which we have daily access. I believe it is important for the overall development but has to be restricted to certain times of the day (our classrooms are too small to permit)."

Another prominent theme that emerged from the teachers' responses was that superhero and physically active play were appropriate for the child's overall development.

Many educators argued that this type of play permitted the children to exert energy, to develop fine and gross motor skills and most importantly, develop social skills. As one teacher stated, "Yes, promote physical exercise (outside)-develop large muscle co-ordination and movement skills." This teacher concurred by saying, "Yes, it is a way to exert energy and is a form of imaginative play. It is important for children to explore their environment and be physically active but in a safe manner." It was obvious that many teachers believed that superhero and other types of physically active play served as excellent tools for language, fine and gross motor, as well as cognitive development. One educator said it this way, "Physically active play makes children to improve basic body movements, helps them to co-ordinate well and cause them to develop their own imaginations and language use."

Very few teachers mentioned a strong dislike for this type of play. The few that did, felt that this type of play was too rough and loud, and could get out of hand. An example of this follows, "There is no room to engage in physical active play and at the same time I don't encourage this in the classroom (i.e., pushing, fighting, jumping, etc not accepted)." Others stated that this type of play encouraged rough behaviour, "no because the children tend to engage in rough play."

Question number three asked the teachers to respond to the items that they may have in the classroom that would elicit physically active play. The responses from the teachers illustrated that overall, they were very open to providing children with a wealth of materials to promote physically active play. Some teachers allowed the use of superhero figures brought in from home and others provided dramatic play figures for the children to manipulate during free play. As one educator said,

We allow superhero figures brought in from home such as Power Rangers, but we don't have any at the day-care. Pretend play area there is a cardboard axe for the tin man in the Wizard of Oz (theme), knight costumes.

There were those teachers who provided superhero and other figurines to the children at the day care, "We allow and provide children with superhero/ines along with a variety of adult size pretend play clothes (cowboy boots, shirts, bests, crowns)." Certain educators provided the children with various characters, and also placed restrictions on the time of day and the area for the play to occur. One educator said,

We only have one medium size bin of some figurines, which we take out in the late afternoon-or if requested. For example John Smith, some other Walt Disney characters.

It appeared that most educators allowed the children to engage in physically active play by providing multiple opportunities, as well as materials. Besides the typical superhero and nonsuperhero figurines, many educators attempted to stimulate the children's play through a variety of dramatic play props, for example, "We do not have any superhero figurines in the classroom but we do have dramatic play props like (police attire as well as fire-fighter attire etc.)." This educator explained the materials that she provided to the children in her classroom such as "Dress-up clothes, inspector gadget and figurines." This educator also described the materials that were set up in her classroom, "At our kitchen center in the class, we have a box full of different kinds of changing clothes, including Spiderman's outfit and fire-fighter hats and.."

A common theme that emerged from the teacher responses was that creativity is an apparent quality that many of the children seemed to possess when playing with various

materials. It appeared that the objects that the children were provided with in the classroom served as mere stepping stones in their physically active play. Regardless, of the materials that educators distributed for children, they were all easily transformed into something more exciting and significant in their play. For example, "they use props such as sheets, Lego's, blocks, peg blocks to engage in physically active play." The children were able to transform any object to bring their fantasy to reality. As one educator stated, "Building type toys, which they make into swords or light savers (Star Wars). Dress-up clothes of capes they can become superheroes." One educator explained how an object could easily be transferred into anything under the sun, "If the child is into physical play, anything in the classroom can become a prop (i.e., a block becomes a weapon)."

Teachers were also asked about their beliefs about physically active and R& T play in the classroom. A prevalent theme emerged from the teachers' responses to physically active play in the classroom was "safety". This was a theme that also emerged in the parent responses as well, and clearly warrants further study. It appeared that a major underlying factor involved with the safety issue in the classroom was space. As one educator stated, "I believe that there should be space and time made for active play in the classroom, with safety in mind, as well as available resources, rules, limits, the classroom can serve as a great place to move." Many educators emphasised that if it were not for lack of space, physically active play would be welcomed in the classroom for example, "the only obstacle I see is space-if children can get hurt, or if it excludes someone (turn taking can overcome some of this) we need to be protective along gender lines." Many children were denied access to physically active play in the classroom because of the lack of space, therefore this type of play becomes restricted to outdoors as one educator said, "We

discourage R&T play in the classroom because of room and space restrictions.

Opportunities are given during gym or outdoor play to express this type of play."

A further concern for superhero and other forms of play in the classroom seemed to stem from the need for strict supervision. Some educators argued that superhero play was too rough and active for the classroom setting. This educator seemed to be confused about the definition of superhero play. Therefore, this view resulted in banning this type of play for fear of escalation or lack of control, as one teacher stated,

Generally, I believe that this kind of play has no place in the classrooms, unless strictly supervised with rules clearly outlined ahead of time. Unless those conditions are met, this kind of play tends to easily get out of control, it's very noisy and someone usually gets hurt in the process (our classrooms are very small).

Another educator explained her perspective on this same issue, "physical active play is not appropriate in the classroom mainly due to what it entails; that is not appropriate behaviour to play rough, hitting, kicking, etc."

Despite some negative impressions about superhero play voiced by educators, there were also many who felt that this type of play could be beneficial for the child. One educator said, "I believe that physical activity in the classroom is important for physical/mental growth for the child as long as it is well supervised and in a safe environment." Many educators believed that this type of play provided the children with multiple opportunities to develop social, physical as well as cognitive skills, which enable the child to develop holistically. One educator stated,

Promotes physical exercise, gives the children the opportunity to use their imagination, children learn motor skills. I believe in physical active play

outside. It is also necessary for children to act out, play with superheroes and tumble play especially from what they see on television and experience at home with the siblings.

This educator voiced her opinion, "We believe that physically active play is an important part of children's holistic development."

It was also apparent that many educators viewed this type of play as a normal facet of everyday life for children. Physically active play enables the child to explore his/her surroundings and manipulate materials in a different context,

I believe that R&T play is a normal form of socialising amongst boys. They socialise through physical contact and as long as they are not hurting one another intentionally. But because of space in the room I would prefer the children to take on physically active play outdoors so as not to disrupt others playing around them. They are allowed playing with superhero figurines at the table as they act out their roles.

It was also apparent that educators were aware of the fact that this type of play was a wonderful outlet for children to use as they exert pent up energy: "Active play gives the children the opportunity to release energy and to role-play."

In conclusion, it was apparent that despite some of the limitations mentioned by the teachers such as lack of space or the possibility of the children behaving out of turn, superhero and other forms of physically active play may maintain an integral role in the development of the young child. Educators have voiced the many benefits that this type of play may provide such as facilitating language, social, cognitive, and physical development. Also this type of play may enable the child to develop imaginative skills and to deal with everyday situations through their play. Most importantly, this type of play

may allow the child to explore and manipulate materials in the classroom. This educator's comment summed up the overall concerns of most educators as well as the benefits: "I don't believe in rough play. As long as no one is getting hurt and all agree with the play (some physical) I think it is necessary for children to act out what they see and experience through the media."

Table 1

Description of Toy Type Treatment

Superhero Toys		Nonsuperhero Toys	
Green Goblin	(1)	Male doll	(1)
Spiderman	(1)	Male doll	(1)
Mad Hatter	(1)	Male doll	(1)
Batman	(1)	Male doll	(1)
Robin	(1)	Male doll	(1)
GI-Joe doll	(1)	Male doll	(1)
GI-Joe enemy	(1)	Male doll	(1)
Power Puff Girl	(1)	Female doll	(1)
Goku (Dragon Ball Z)	(1)	Male doll	(1)
Crillin (Dragon Ball Z)	(1)	Male doll	(1)
Power Ranger	(1)	Male doll	(1)

Table 2

Means, Standard Deviations and Ranges of Individual Roles In Superhero and Nonsuperhero Condition (n=29)

	<i>M</i>	<i>SD</i>	<i>Range</i>
Char/Fictive Sup	29.41	2.23	25 - 32
NonSuperhero	25.17	5.67	12 - 32
Fam/Relat Sup	.00	.00	0 - 0
NonSuperhero	.79	1.97	0 - 10
Occupational Sup	.00	.00	0 - 0
NonSuperhero	.55	1.35	0 - 6
Expl/Negot Sup	1.48	1.90	0 - 7
NonSuperhero	2.45	2.81	0 - 10
No Role Sup	.79	1.21	0 - 4
NonSuperhero	2.10	2.74	0 - 11
Peripheral Sup	.003	.19	0 - 1
NonSuperhero	.17	.47	0 - 2
Functional Sup	.24	.95	0 - 5
NonSuperhero	.76	2.68	0 - 14

Note. Abbreviation Sup = Superhero, NonSup = Nonsuperhero, Char/Fictive = Character/Fictive, Fam/Relat = Familial/Relational, Explo/Nego = Explo/Negot

Table 3

Means, Standard Deviations and Ranges of Individual Themes in Superhero and Nonsuperhero Conditions (n=29)

	<i>M</i>	<i>SD</i>	<i>Range</i>
Building Sup	.006	.26	0 - 1
NonSuperhero	.90	2.73	0 - 13
Nurt/Caring Sup	.003	.19	0 - 1
NonSuperhero	.10	.31	0 - 1
Dom/House Sup	.00	.00	0 - 0
NonSuperhero	.28	1.00	0 - 5
Act/Battl Sup	22.76	4.98	14 - 31
NonSuperhero	22.24	5.60	13 - 31
Performing Sup	.00	.00	0 - 0
NonSuperhero	.003	.19	0 - 1
Capt/Rescue Sup	2.90	3.59	0 - 13
NonSuperhero	2.03	3.74	0 - 17
Subm/Van Sup	.14	.58	0 - 3
NonSuperhero	.00	.00	0 - 0
Attack/Flee Sup	.59	.98	0 - 3
NonSuperhero	.72	1.67	0 - 6
Expl/Negot Sup	3.66	2.91	0 - 11
NonSuperhero	3.62	3.71	0 - 14

No Theme Sup	1.90	2.45	0 - 8
NonSuperhero	2.07	2.69	0 - 11

Note. Abbreviations for Sup = Superhero, Nurt/Caring = Nurturing/Caring, Dom/House = Domestic/Housekeeping, Act/Battl = Action/Battling, Capt/Rescue = Capture/Rescue, Submit/Van = Submit/Vanquish, Expl/Negot = Exploration/Negotiation

Table 4

Means, Standard Deviations and Ranges of Verbal, Physical Aggression and Use of Aggressive Play Object In Superhero and Nonsuperhero Condition (n=29)

	<i>M</i>	<i>SD</i>	<i>Range</i>
Verbal Agg. Sup	.00	.00	0 - 0
Verbal Agg. NonSup	.00	.00	0 - 0
Physical Sup	.00	.00	0 - 0
Physical NonSup	.00	.00	0 - 0
Agg. Play Obj Sup	.31	1.00	0 - 5
Agg. Play Obj NonSup	.17	.66	0 - 3

Note. Sup = Superhero, NonSup = Nonsuperhero, Agg = Aggression, Obj = Objects.

Table 5

T-tests Between Superhero and Nonsuperhero Character/Fictive Roles (n=29)

	M	<i>t</i>	<i>df</i>	<i>p</i>
Character/Fict Sup	29.41	4.19	28	.01
Nonsuperhero	25.17			
Familial/Relat. Sup	.00	-2.167	28	.05
Nonsuperhero	.79			
Occupational Sup	.00	-2.198	28	.05
Nonsuperhero	.55			
Explo/Nego Sup	1.48	-1.795	28	.05
Nonsuperhero	2.45			
No Role Sup	.79	-2.766	28	.01
Nonsuperhero	2.10			
Peripheral Sup	.003	-1.440	28	.08
Nonsuperhero	.17			
Functional Super	.24	-1.034	28	<i>ns</i>
Nonsuperhero	.76			

*All analyses are 1-tailed

Note. Abbreviation Sup = Superhero, Character/Fict = Character/Fictive, Familial/Relat = Familial/Relational, Explo/Nego = Exploration/negotiation

Table 6

T-tests Conducted Between Superhero and Nonsuperhero Themes (n=29)

	<i>M</i>	<i>t</i>	<i>df</i>	<i>p</i>
Building Sup	.007	-1.72	28	.05
NonSuperhero	.90			
Nurt/Caring Sup	.003	-1.44	28	.08
NonSuperhero	.10			
Domest/House Sup	.00	-1.49	28	.07
NonSuperhero	.28			
Act/Battl Sup	22.76	.475	28	<i>ns</i>
NonSuperhero	22.24			
Performing Sup	.00	-1.00	28	<i>ns</i>
NonSuperhero	.003			
Capt/Resc Sup	2.90	1.24	28	<i>ns</i>
NonSuperhero	2.03			
Submit/Van Sup	.14	1.28	28	<i>ns</i>
NonSuperhero	.00			
Attack/Flee Sup	.59	-.538	28	<i>ns</i>
NonSuperhero	.72			
Explor/Negot Sup	3.66	.044	28	<i>ns</i>
NonSuperhero	3.62			
No Theme Sup	1.90	-.272	28	<i>ns</i>

*All Analyses are 1-tailed.

Note. Abbreviations for Sup = Superhero, Nurt/Caring = Nurturing/Caring, Domest/House = Domestic/Housekeeping, Act/Battl = Action/Battling, Capt/Resc = Capture/Rescue, Submit/Van = Submit/Vanquish, Explor/Negot = Exploration/Negotiation.

Table 7

T-tests Conducted Between Superhero and Nonsuperhero Variety of Themes (n=29)

	<i>M</i>	<i>t</i>	<i>df</i>	<i>p</i>
Superhero	3.48	-.486	28	<i>ns</i>
Nonsuperhero	3.62			

*All analyses are 1-tailed.

Table 8

T-test Conducted Between Superhero and Nonsuperhero Levels of Physical Activity

(n=29)

	<i>M</i>	<i>t</i>	<i>df</i>	<i>p</i>
PHYSICAL ACTIVITY				
Phys. Activity Sup	2.417	-1.801	28	.05
Phys. Activity NonSup	2.550			

*This Analysis is 1-tailed.

Note. Abbreviations for Sup = Superhero, NonSup = Nonsuperhero, Phys = Physical.

Table 9

Pearson Correlation Between Television Viewing and Roles (n = 29)

Roles	Amount of Television Viewing
Superhero	
Functional	-.18
Familial/Relational	.00
Character/Fictive	.01
Peripheral	-.09
Occupational	.00
Exploration/Negotiation	-.04
No Role	.19
Nonsuperhero	
Functional	-.35*
Familial/Relational	.22
Character/Fictive	.25†
Peripheral	-.41 **
Occupational	.10
Exploration/Negotiation	-.21
No Role	.32*

† p < .10 * p < .05 ** p < .01

*All analyses are 1-tailed.

Table 10

Pearson Correlation Between Television Viewing and Themes (n = 29)

Themes	Amount of Television Viewing
Superhero	
Nurturing/Caring	-.15
Domestic/Housekeeping	.00
Action/Battling	.26 †
Building	-.34*
Performing	.00
Capture/Rescue	-.34*
Submit/Vanquish	-.17
Attack/Flee	-.02
Exploration/Manipulation	.09
No Theme	-.01
Nonsuperhero	
Nurturing/Caring	-.13
Domestic/Housekeeping	-.06
Action/Battling	.10
Building	-.24
Performing	-.06
Capture/Rescue	.01
Submit/Vanquish	.00

Attack/Flee	.37*
Exploration/Manipulation	-.25†
No Theme	.17

† p < .10 * p < .05 ** p < .01

*All analyses are 1-tailed.

Table 11

T-tests Conducted Between Superhero and Nonsuperhero Use of Aggressive Play Objects
(n=29)

	<i>M</i>	<i>t</i>	<i>df</i>	<i>p</i>
Superhero	.31	.66	28	<i>ns</i>
Nonsuperhero	.17			

Table 12

Parent Questionnaire (n=58)

	Percent	Frequency
Toys Children Play With At Home		
Blocks	48.3	28
Lego	74.1	43
Cars/Trucks	75.9	44
Superhero Toys	63.8	37
Art Materials	65.5	38
Construction Toys	58.6	34
Books	74.1	43
Bikes	50	29
Pretend Play Figurines	53.4	31
Outdoor Equipment	62.1	36
Other	41.4	24
Television Characters Allowed In House	94.8	55
Own Superhero Toys	87.9	51
Play With Superhero Toys	81	47
Play Involve Television Characters	75.9	44
Television Characters Are Superheroes	55.2	32
Engage In Physically Active Play	98.3	57

Frequency of Physically Active Play

Never-sometimes	1.7	1
Sometimes	13.8	8
Sometimes-Frequently	43.1	25
Frequently	39.7	23

Child Play

Alone	1.7	1
Peers	41.4	24
Peers/Alone	56.9	33

Hours Television Watched Per Week

0	1.7	1
2	6.9	4
3	5.2	3
4	8.6	5
5	5.2	3
6	6.9	4
7 - 10	44.7	26
11 - 14	13.8	8
15 – 21	6.8	4

Children's Favourite Television Program

Superhero	6.9	4
Nonsuperhero	53.4	31
Superhero/Nonsuperhero	36.2	2

Children's Favourite Superhero Shows

Superhero	56.9	33
Nonsuperhero	12.1	7
Superhero/Nonsuperhero	5.2	3
None	22.4	13

Table 13

Teacher Questionnaire (n=18)

	Percent	Frequency
How Frequently Engage in Physically Active Play In Classroom		
Never	5.6	1
Moderately	55.6	10
Moderate-Frequent	27.8	5
Frequently	11.1	2
Classroom Have Items Elicit Physically Active Play		
Daycare	83.3	15
Item from home	5.6	1
Importance Of Physically Active Play Curriculum		
Moderately Imp	11.1	2
Moderately-Very	50	9
Very Imp.	38.9	7
Where Engage In Physically Active Play		
Outdoors	11.1	2
Indoor/Outdoor	88.9	16

Discussion

The mass media plays an instrumental role in children's play in relation to choice of toys, level of physical activity, pretend themes as well as role enactment. Studies suggest that toys do not independently elicit the behaviour of the child, but rather children's play and language tend to follow the themes suggested by the toys and props themselves (Quiltich & Risley, 1973; Howe et al., 1993). There has been scant research on the influence of media-related toys on children's level of physical activity and imaginative play. Research findings have indicated that media-related play, more specifically superhero and rough and tumble (R&T) may be associated with aggressive and violent behaviour (Kostelnik et al., 1986; Kuykendall, 1995; Carlsson-Paige, & Levin, 1998). However, there is not enough empirical data on the associations between violence and superhero play to draw any definitive conclusions. Therefore, based on this evidence, the primary purpose of the present study was to investigate the influence of superhero vs nonsuperhero materials on boys' physically active and imaginative play, specifically, on the frequency and quality of their play.

The present study also investigated both parents' and teachers' views on superhero and physically active play. Further analyses focused on the possible aggression that may be associated with this type of play. Additionally, the hours of television viewing as reported by parents were also studied in order to investigate a possible relationship with imaginative play.

Impact of Superhero Toys on Roles

The first hypothesis that a higher frequency of character/fictive roles would occur in the superhero toy condition than in the nonsuperhero condition was supported. The findings illustrated that the materials the dyads were provided with may have influenced

the roles that boys engaged in, that is the superhero toys were associated with particular roles (e.g., character/fictive, exploration/negotiation). Hence, it appeared that children's choices of roles were strongly influenced by the media character. This finding supports Garvey and Berndt's (1975) research that as preschoolers develop they become more interested in enacting roles that are less familiar than the typical domestic/familial theme and they begin to progress towards more fictional and novel occupational roles. This finding may also support Garvey's (1976) theory that role-enactment behaviours are influenced by social situations (other participants, adults, and children involved in the play) (Garvey, 1976).

A further consideration, which may have also influenced the dyads' choice of role, was the environment. As demonstrated by Howe et al., (1993) and Petrakos and Howe (1996), the roles that children engage in, depend on the setting of the environment. Considering that all dyads were taken to a private space within the day care setting in order to play with the materials, it may be possible that initially this private environment may have been novel and initially elicited more play. However, studies show that the children do return to familiar themes and roles after exploration (Petrakos & Howe, 1996). Also, considering that many of the superhero toys were familiar to the participants this could also have elicited more character/fictive role play (Droege & Howes, 1991).

Additionally, considering that the superhero toys were connected to the media, it is possible that children were imitating the roles that they were accustomed to associating with these characters from particular television programs. This argument was supported by Carlsson-Paige and Levin's (1983, 1990) work showing that children use television-based toys to imitate television images and behaviours. On the other hand it is possible that the children were simply exploring the roles that they have associated with these

characters on a more personal level. This would support Isaac (1937), Piaget (1951) and Smilansky's (1969) developmental view on play. These proponents argued that through pretense children are able to build an understanding of life experiences. Further, this finding may be explained by Piaget's egocentric theory of play, that is, children, may be adopting points of view different from their own and learn how actions affect others (Isaacs, 1937; Kamii & DeVries, 1978, 1980; Piaget, 1951). Clearly, these speculations require further study.

Gender may also be an important factor, because children play longer and in more complex ways when they interact in same-gender groups and with gender-preferred toys (Huston, 1983; Rubin et al., 1983). Therefore, the fact that the dyads were composed of the same gender (males) and they were friends may also have encouraged them to engage in character/fictive roles. According to Carlsson-Paige and Levin's (1984) data, some girls were attracted to war and superhero play, however, most often it was the boys who showed a compelling interest in this type of play. Findings also suggested that the dyads may have engaged in character/fictive roles more often because of the superhero characters. This may support Singer and Singer's (1981a) view of sex-role stereotyping.

Considering the literature on superhero play (Bauer & Dettore, 1997), children often find superhero play appealing because it enables them to assume roles and explore different personas through their play. Therefore, engaging in character/fictive roles may be a release mechanism for the children. It may allow them to explore the different personas of good vs. evil, and experience the powerful models that superhero characters offer. Thus, by engaging in character/fictive roles the children may have been able to take on the role of the "bad guy" and the "good guy" and alternate roles, enabling them to experience

different perspectives and make sense of a dichotomous world. Further study is needed, however to confirm this notion.

It was interesting to note that more familial roles were observed in the nonsuperhero condition, which supports Carlsson-Paige and Levin's (1983,1990) argument that superhero toys often establish and predefine the roles children engage in. As expected, it appeared that the superhero toys elicited more superhero roles, whereas when provided with nonsuperhero toys, boys tended to engage in more familial roles. This finding supports Pulaski's (1973) research that less structured toys allow greater freedom for the child to manipulate and extend their play. Thus, it is possible that the nonsuperhero toys provided the children with more room for interpretation and imagination in their play. Again, this argument could also explain why there were more occupational roles found in the nonsuperhero condition. Similarly, there were more exploration/negotiation roles observed in the nonsuperhero condition. In conclusion, when children have toys that are less structured and defined, they may be able to manipulate roles more frequently and engage in less repetition in their play. Conversely, when presented with superhero figures the dyads engaged in significantly fewer of the other roles and more focused on the superhero roles.

Impact of Superhero Toys on Themes

It was expected that there would be a greater variety and frequency of themes in the nonsuperhero condition. Based on Pulaski's (1973) work, it was expected that nonsuperhero toys (less structured toys) would permit the child to engage in a greater variety of themes than in the superhero condition (highly structured toys). However, this hypothesis was not fully supported. Findings showed that there were significant differences in the building theme. More frequent occurrences of the building theme were

apparent in the nonsuperhero condition than in the superhero condition. This may suggest that children were more imaginative and creative with the nonsuperhero toys than the superhero toys for themes (Pulaski, 1973).

It also was found that children did not engage in a significantly greater variety of themes in the nonsuperhero condition as predicted. Another important finding was that the dyads spent more time in the nonsuperhero condition engaging in play with no theme. This may indicate that because the materials were less structured it was more difficult for them to engage in a consistent theme. Also of interest, was that the dyads engaged in more exploring/negotiation of themes in the superhero condition. This may suggest that the toys created an environment, in which, children needed to come to a shared understanding. As explained by Gonçu (1993), the concept of intersubjectivity may be illustrated here, by which the dyads spent a considerable amount of time exploring and negotiating the possible themes that may develop. This also may support Parten (1933) and Gonçu's (1993) claims that imaginative play is an integrative tool in influencing peer cooperation and understanding. These results might indicate that the children engaged in what Parten (1933) labelled as the most advanced form of peer social participation: cooperative play. The negotiation and exploration theme may have encouraged children to strive to reach a common goal through negotiation of plans, roles and themes.

Overall, it appeared that the most popular theme that emerged in both conditions was the action/battling theme. It did occur slightly more in the superhero condition, but there was not a significant difference between the two conditions. This is an important finding, because it appeared that regardless of the toys the children were provided with they chose to engage in an action/battling theme for the majority of the time. This may suggest that the children are capable of using imaginative play as a device in which they

can make sense of a confusing adult world. Apparently, these children enjoy engaging in the battle type themes, which may have been reinforced by the fact that they were placed in same gender groups with preferred toys. Moreover, this finding may support the literature on sex-role stereotyping suggesting that the boys in this study may have played actively, perhaps more so than girls (Singer & Singer, 1981), however this speculation needs to be confirmed in future work.

It is interesting to note that the three dominant themes of superhero play outlined by Carlsson-Paige and Levin (1990) of (a) capture and rescue, (b) submit and vanquish, and (c) attack or flee were not the significant themes of choice in either condition in the present study. Interestingly, it appeared that the three themes outlined above were only chosen in moderation, if chosen at all. Perhaps the action/battling theme may have incorporated aspects of each of the three themes and might warrant a close re-examination of the coding scheme. The nurturing/caring and domestic/housekeeping themes were evident as trends with more frequent observations in the nonsuperhero condition. Perhaps if the sample had been larger, the findings would have been significant, but it does appear that when children were provided with nonsuperhero toys they may engage in different themes than with the superhero toys. In conclusion, when the boys in this study were provided with nonsuperhero toys, they appeared to engage in a greater number and variety of no theme than in the superhero condition. Considering the findings of exploration and negotiation of themes, it may be possible that certain superhero toys may assist the children in reaching what Gonçu (1993) termed as intersubjectivity. Considering that intersubjectivity is created by finding a shared/common goal; popular superhero toys may create an opportunity for peers to have things in common. Finally, the boys in this study

appeared to engage in the action/battling theme for the majority of the superhero and nonsuperhero toy conditions.

Impact of Superhero Toys on Boys' Level of Physical Activity

It was expected, considering that superhero play has been associated with high levels of physical activity that the dyads would engage in a significantly higher amount of physical activity within the superhero condition. However, findings did not support this prediction and the results illustrated that the level of physical activity was significantly higher in the nonsuperhero condition. This is a significant finding that may contradict other researchers such as Carlsson-Paige and Levin (1990), and Boyatzis et al. (1995a) who suggested that superhero play was associated with aggressive and very physically active play. What the findings suggest is that regardless of the types of toys the dyads were provided with the boys still engaged in physically active play, but without the aggression. The results may also be explained by the environment in which the children engaged in the toy conditions. Perhaps, the dyads were less physically active because of the context in which they were placed (Howe et al., 1993) and if studied in another context (e.g., home, outdoors) there might be evidence of predicted association. As found in this study, the boys were physically active in both conditions, with and without the superhero toys, suggesting that these children may not necessarily need media imbued characters in order to engage in high levels of physical activity.

Results from the present study are in line with Boyd's arguments that superhero play is a special type of R&T play. Primarily, the level of physical activity involved in both conditions suggests that the boys engaged in a moderate amount of running, chasing, and mock fighting in their play. Further, in terms of themes, the theme that occupied the greatest amount of time during the play sessions of both conditions was action and

battling. This may confirm Kostelnik et al.'s (1986) work on characteristics of R&T play. This is a major finding, which may suggest that Boyd's notions may be authentic. Furthermore, it is possible that the level of physical activity and the action and battling theme are characteristics of boys play in general.

Further evidence supporting the possible similarities between superhero and R&T play, can be exemplified by the fact that the dyads were formed based on the peer nominations of who they liked to play with, which may have influenced their choice of roles, themes, and level of physical activity. That is, research indicates that R&T players tend to be friends (Pellegrini, 1987) and this was reinforced in this study because the dyads were composed of friends who reciprocated the desire to play with one another. In summary, the results from the present study appear to indicate that the boys engaged in significantly higher amounts of physically active play in the nonsuperhero toy condition, therefore this finding did not support the hypothesis. Further, this finding may suggest that superhero play may not be as aggressive or violent as researchers have argued. Further study is needed in order to draw any definite conclusions. Finally, results from the study may suggest a possible link between superhero and R&T play and this finding warrants further research.

Aggression and superhero play. A significant finding from the present study revealed that physical and verbal aggression between the dyads in both play conditions was nonexistent. Therefore, the play of the dyads in both superhero and nonsuperhero conditions did not involve any physical or verbal aggression. This finding was supported by Boyd's (1997) study where she observed children in day cares for a period of 13 weeks and reported no aggression in the children's superhero play. This finding may shed some light on previous arguments that superhero play is aggressive (Carlsson-Paige & Levin,

1990; Boytazis et al., 1995a). The present study may indicate that children's superhero and physically active play does not necessarily result in aggression or violence. It is acknowledged that the sample of the present study was small, however, it is still important to mention that within the 29 dyads that participated, there was no record of physical or verbal aggression. Thus, these findings may contradict Boyatzis et al., (1995b), Levin and Carlsson-Paige (1995a) and Bandura's (1961) views that children will imitate behaviours of favourite superheroes and use aggression to resolve conflict. On the other hand, it is possible that definitional differences may have occurred between the current study and previous researchers. This finding may reinforce the R&T literature as well (Pellegrini, 1997) suggesting that this play is not aggressive by nature. These findings could refute many teacher views concerning superhero play (Carlsson-Paige, 1983; Boyatzis et al., 1995b) and warrants further study in order to clarify how educators have come to view R&T and superhero play as aggressive.

The results of the study do, however, show that a small number of dyads from both toy conditions, engaged in play with the use of aggressive play objects (i.e., sword, gun, weapons), although there was not a significant difference between the two conditions. It is imperative, however, to mention that there was a low frequency of occurrence of use of aggressive play objects in both play conditions. A slightly higher number of aggressive play objects was recorded in the superhero condition and perhaps supports the beliefs of theorists and educators that superhero play incorporates the use of weapons (Carlsson-Paige & Levin, 1983, 1990). It is critical to note that the frequency of occurrence was very low and no aggression ensued. The children who did incorporate weapons into their pretense used imaginary swords or guns as props for the themes that they engaged in such as Star Wars (lasers) or cops and robbers (guns). It is possible, that this finding may be a

case of imitation, because children were attempting to recreate Spiderman or Batman characters in their play. Considering that they used aggressive play objects in both conditions, this could suggest that superhero toys do not necessarily encourage the children to incorporate aggressive play objects in their pretense. Conversely, order of the toy presentation may also have influenced the children's level of aggression as well as play choices and should be explored.

In conclusion, the findings from this study indicate that the boys in both play conditions did not engage in physical or verbal aggression during the play sessions. Use of aggressive play objects was recorded to occur in both conditions, but was slightly higher in the superhero condition. However, the use of play objects in the superhero condition occurred infrequently, and did not result in aggression or violence as previously indicated in other studies.

Adults' misinterpretation of superhero play as being aggressive. In terms of adults' misinterpretations of superhero play as being aggressive, the present findings support this view. Overall, the qualitative responses of both parents and educators indicated that there appears to be some confusion between what this type of play entails. Many adults fear for the safety of their children because they do not want their child to be aggressive or to be hurt by the perpetrator of aggression. It may be possible that parents and educators are simply confusing action themes with aggressive behaviour, therefore resulting in ambivalence towards this type of play. This parent explains, "I believe it is important for boys to play rough as long as it is varied with other types of play. Good and builds coordination and as long as no one gets hurt." The misinterpretation of superhero play as being aggressive and violent has also been suggested by some educators who feel that this type of play results in violence and aggression for example, "no, because children

tend to engage in rough play." Even the concept of the kicking and play fighting was also a concern that was addressed by educators, such as this one, "I don't encourage this in the classroom (i.e., pushing, fighting, jumping etc. not accepted)." However, the results of the present study indicate that the fears of many parents were not realised, because the boys did not play roughly nor did they engage in physical or verbal aggression when playing with the superhero toys. However, further study, is necessary in order to draw conclusive inferences.

Some parents and educators felt that physically active play represented multiple opportunities for the facilitation of social, cognitive, language and physical development. This supports Pellegrini's (1988) and Pellegrini and Smith's (1998) view that superhero play may present children with the opportunity to develop social skills, which may be associated with peer interactions. In the present study children appeared to engage in a great deal of physical activity, as well as role play, and exploration and negotiation of themes. One parent explained, "I think that it is normal for boys to engage in R&T and that it has some benefits (i.e., reading facial cues and learning about other perspectives). It does need proper supervision." This educator concurred, "promote physical exercise (outside) develop large muscle coordination movement skill."

In the present study, the most prominent theme that the children engaged in with the use of superhero characters was action and battling. This theme involved pitting good against evil, mock fighting, and lots of physical activity. According to Pellegrini (1998), commonly cited play themes of R&T play are Star Wars, Spiderman, cops and robbers. Therefore, this gives light to support the theory that superhero play is a special type of R&T. In summary, the findings from the present study indicate that adults appear to have mixed feelings about superhero play. Some parents and educators feel that these types of

play result in physical and verbal aggression, whereas, others feel that children can benefit from the play. Perhaps, some parents and educators may be confusing the level of physical activity and the action involved in this play with aggression.

Impact of Television Viewing on Roles and Themes

This hypothesis predicted that roles and themes exhibited by the dyads would be positively correlated with the number of hours of television viewed. It was expected that the more hours of television that the dyads watched the more frequent the superhero roles and themes that they would engage in.

Findings for the superhero condition indicated that the hours of television watched had no relationship with the roles that the children engaged in. This is a significant finding and contradicts Carlsson-Paige and Levin's (1990) notion that television violence influences children's play. This may be explained by the sample size and it is possible that if the sample had been larger a relationship may have been found in this condition. This finding may suggest that regardless of the hours of television viewed and the programs that parents cited (i.e., Spiderman, Batman, Power Rangers), children did not follow particular predefined roles. Thus, this may suggest that the major fear of many educators and parents (that television viewing influences the types of roles in play) was not supported.

Findings in the nonsuperhero condition indicated that there was a significant negative correlation between hours of television viewed and functional roles. This suggested that the less television watched, the more the children engaged in functional roles (e.g., pretending to drive a rocket). A negative correlation between hours of television watched and number of peripheral roles in the nonsuperhero condition indicated that the less the dyads watched television, the more they engaged in peripheral roles (e.g.,

imaginary friend). The final positive correlation between hours of television viewed and observing no role indicated that the more television the dyads watched the more they engaged in no role in their play. The positive trend that was found between nonsuperhero character/fictive roles may suggest that the more television viewed, the more children engaged in character/fictive roles. Perhaps if the sample had been larger more significant findings would have surfaced.

In the superhero condition, hours of television watched were negatively correlated with the building theme. This indicated that the fewer hours of television viewed by the dyads, the more they engaged in the building theme. This finding may be explained simply by the fact that children who spend a great deal of time watching television may have the tendency to imitate, or reenact themes that they have seen on television. Here there is support for Carlsson-Paige and Levin's (1998) view that television influences young children. Most programs for children between 4 – 5 years of age are not composed of construction and building themes (further study may lead to specific findings). However, the nature of the superhero toys themselves does not lend itself very well to building. The second, negative correlation found between hours of television viewed and the capture and rescue theme in the superhero condition, suggested that the less television watched by the dyad, the more capture/rescue themes they would engage in.

Findings in the nonsuperhero theme condition suggested a significant positive correlation between the attack/flee theme and television viewing. Findings suggested that the more television the dyads watched the more they engaged in attack/flee themes. This finding was very notable, considering that Carlsson-Paige and Levin (1990) consider the attack/flee theme as a superhero theme. This suggests that television viewing might have an impact on certain themes that children engage in. It is still unclear as to why it did not

occur more with superhero toys and further study is needed in order to understand this finding. Also, this indicates that the toys children are provided with do not necessarily predict the type of play they will embark upon. Thus, it appears that the play may depend on the children's life experiences as well as a combination of many external factors such as gender, temperament, and age.

A negative trend between hours of television viewed and the exploration/negotiation theme was found for the nonsuperhero condition, suggesting that the more the dyads watched television, the fewer exploration/negotiation themes they engaged in. This could indicate several possible explanations: (a) it may be possible that when children watched many hours of television they tend to spend less time in negotiation, therefore they were still in egocentric stage of play (Piaget, 1951), considering that the themes are already provided for them by the program; or (b) it may also be possible that these children are advanced players with high levels of intersubjectivity (shared understanding; Goncu, 1993) and they do not need to spend great amounts of time delegating and deliberating themes and roles because they get their ideas from television. Future work is required in order to confirm these findings.

In conclusion, the findings indicate that for the superhero condition, the hours of television watched had no relationship with the roles the children engaged in. Findings in the nonsuperhero condition suggested that there was a negative correlation between hours of television viewed and functional roles. Further, a positive correlation was found between hours of television viewed and no role. In the superhero condition for themes, hours of television watched were negatively correlated with the building theme, thus suggesting that superhero toys elicit fewer building themes. A negative correlation between hours of television viewed and the capture and rescue theme in the nonsuperhero

condition was found. Finally, a positive correlation between hours of television viewed and the attack and flee theme in the nonsuperhero condition was found.

Qualitative Findings

Parents' views. In terms of qualitative findings it appeared that many of the children who participated in the present study owned and played with at least one superhero character in their homes. This confirms the present researcher's view that the dyads were familiar with the superhero characters used in the study. Furthermore, the parents reported that a moderate number of the dyads watched superhero programs.

The responses provided by the parent/guardian indicated that the main preoccupation in terms of physically active and superhero play was safety of the children such as this parent explained, "I think it is fine up to a point, as long as it doesn't get aggressive. I intervene if I think someone might get hurt." The parents felt that the boys needed to release pent up energy, however they showed concern for safety of the children and did not want their child to get hurt or harm one of their peers. As this parent explained, "All active play is encouraged as long as he doesn't hurt himself or someone else." Other parents emphasized the importance of supervision that rules and limits needed to be outlined prior to commencement of this type of play. However, if there was supervision then this type of play would be encouraged as this parent stated, "I think as long as there is some supervision and limits its fine, no hitting, etc." The parents in general felt that superhero and physically active play were necessary for the healthy development of their children and facilitated fine/gross motor, language, cognitive, and social skills. For example, "I think it is normal for boys to engage in this play and that it has some benefits (i.e., reading facial cues and learning about other perspectives)." Yet, it appeared that some parents had reservations about physically active and superhero play, because they

thought that the children needed to be active and to release energy, however they did not feel comfortable with the kicking and the wrestling that often accompanies this type of play. Other parents felt that in general this type of play should be reserved for specific areas, namely outdoors where the children have unlimited space in which to engage in this type of play, as expressed here, "I do not appreciate a lot of rustle and bustle in play, however, other physical activity (running, jumping, etc.) does not bother me, as long as the area is appropriate." The most common themes that emerged from the data were that this type of play is normal for children, especially young boys, "I believe that R&T play is a normal physical activity for any child. It is a very normal type of behaviour for boys at this age."

Educators' views. The educators supported physically active play in the classroom and a high percentage of them said that they provided the children with items that could elicit physically active play. The majority of the educators felt that physically active play was necessary for the development of the child and encouraged this type of play both indoors and outdoors.

The educators seemed to share similar concerns with the parents concerning superhero and physically active play. The educators reported that physically active play was permitted in the classroom, however there were certain restrictions that resulted in specific areas of the classroom designated for this type of play as well as time frames during the day. The educators felt that this was their way of controlling the play and ensuring the safety of the children in their care. A similar pattern found in both the parent and educator responses were the issue of safety. Many educators listed safety as their prime concern with superhero and physically active play in the classroom. Several of the educators felt that in order to permit this type of play they needed to set certain limits in

the classroom. Additionally, supervision was an issue that the teachers felt was necessary in order to allow this type of play. As long as the children had limits that were set for them, coupled with rules and supervision then this type of play was encouraged by most educators.

Some educators felt that this type of play should only be permitted outdoors where the children have space to move freely without harming or interfering with their peers' play. These educators also felt that this play should only occur outdoors. However, a select few felt that this type of play should not occur at all because it is too rough and loud. Similar concern amongst the educators in this study was lack of space in the classrooms. Many offered that they would allow the children to engage in this play if they had ample room in the classroom, but many felt that their classrooms were too small to safely encourage this type of play so they considered alternate options such as a gym, or outdoors.

Finally, the most significant finding was that most teachers felt that superhero and physically active play were a normal part of the children's development and that it served many benefits. These same educators reported providing children with many materials and props to assist them in their fantasy play such as: figurines, Spiderman costumes, inspector gadget costumes, as well as brooms and other handmade materials. In conclusion, based on these findings, it appeared that the concerns parents and teachers reported that superhero and physically active play appear to be highly overrated. These adults felt that this type of play should be permitted with exceptions such as limits, rules, and supervision. However, once these criteria have been met, this type of play may serve many beneficial purposes for the developing child, such as, language, cognition, social, as well as fine and gross motor skills.

Limitations of the Present Study

The present study has helped to contribute to the understanding of superhero and physically active play; however, several limitations should be noted. One of the limitations was that the sample was composed of middle-class and well-educated families, therefore the results cannot be generalized to all male dyads. Further, the sample size was relatively small and, therefore, certain differences may not have been detected. This may explain why the results of certain tests were not significant, because the statistical power may have been relatively low. Additionally, all of the children attended day care, therefore the results may not be representative of children who do not attend day care. Another limitation of the present study was the conception of the parent and teacher questionnaire. The protocol for both questionnaires was created by the researcher and may have reduced the rate of reliability and validity of this instrument. An additional limitation in this study was the lack of measurement on the temperament of the children, therefore making it more difficult to assess play behaviours. A further limitation of this study was the gender of the dyads, perhaps findings may have been different if males and females were studied, which may have shed new light on the topic of superhero play. Another limitation was the duration of the present study in that the dyads were observed engaging in both sessions for a total of 16 minutes each. Therefore, this may not have provided sufficient time upon which to make any conclusive remarks on this type of play. Perhaps, if the dyads had been observed for longer periods of time, more conclusive results may have been found. Additionally, a clear distinction between superhero, physically active and R&T play should have been described in both the parent and teacher questionnaires. Finally, R&T play should have been directly measured in the study in order to discriminate between the different types of play.

Future Directions

Previous literature on superhero play is sparse, although studies that have investigated specific aspects of this play (e.g., Boyd, 1997; Carlsson-Paige & Levin, 1990) bring valuable information to the field of education and psychology. Findings from the present study were significant and illustrated that male dyads between 4 - 5 years of age were capable of engaging in a variety of themes and roles, as well as physical activity in their play with the use of superhero materials. Further, this study indicates that these dyads were able to engage in superhero play without the violence and aggression that many associate with these types of play. Additionally, this study has also shed light on the possibility of considering superhero play as a special type of R&T play. Future research, however, is needed to further develop the understanding of this type of play, as well as the possible benefits that it may provide in the development of young children and it would also permit researchers to address the limitations of the present study.

Based on the fact that this study was composed of middle-class educated families, future research could study superhero play in children from different socio-economic backgrounds, enabling the researcher to determine whether SES influences children's play choices. Also, the sample size was relatively small, therefore future research should focus on expanding the sample size in order to increase the level of generalizability of the results. Further, considering that the researcher composed the questionnaire protocol, future studies should attempt to locate a questionnaire that may increase validity and reliability of results or ascertain it for this particular questionnaire as part of future work. Another important issue, which should be addressed in future research is temperament of the children within the study. More specifically, a future study could use a temperament measure in order to establish a better understanding of children's play behaviours, in

particular children's level of physical activity. This may also shed light on specific play choices as well as behaviours of specific individuals. In addition, other observations of superhero play should incorporate both genders into the study, for example, the behaviours of boys, girls and boy-girl dyads. This may enable the researcher to draw more significant conclusions from the results. Also, a more naturalistic context such as a playground, classroom, or child's backyard may yield interesting results. Finally, a future study should focus on increasing the amount of time allocated for the observations of the dyads, thus enabling the researcher to detect differences over a longer time frame. Perhaps, the researcher could follow the children over the period of a year or several years permitting a longitudinal view of the effects of superhero materials on children's play. In terms of defining superhero, physically active, and R&T play, in the future these three terms should be clearly defined in both the teacher and parent questionnaires in order to ensure similar understanding among participants. Finally, it would also be interesting to code the play not only for superhero play, but also R&T play. This would allow the researcher to draw more conclusions on the possible relationship between superhero and R&T play.

Implications for Parents and Teachers

Results from this study have practical implications in settings such as schools and homes. Findings concerning the level of physical activity that the dyads engaged in for both play conditions may suggest that this type of play can significantly enrich children's fine and gross motor skills. Parents, as well as educators, may benefit by permitting children to engage in this type of play both indoors and out. With specific guidelines, rules and supervision this type of play may enable the child to increase flexibility, as well as develop more refined gross motor skills such as running, jumping, as well as whole body

co-ordination. Educators could begin by permitting this type of play outdoors or in a space large enough to permit for running and chasing. This will allow the children to release some of their pent up energy, and may serve as a form of play therapy. Benefits from this type of play also have practical implications for the classroom, where children can explore and experience different roles, and themes through their play. By encouraging this type of play educators are providing children with an excellent opportunity to engage in socializing and perspective-taking. On the other hand, if this type of play is repeated and linked to television characters, there is limited opportunity for children to develop their own imaginations.

Teachers can intervene in the children's play in the classroom and assist the children in expanding and elaborating their play (Carlsson-Paige & Levin, 1983). By permitting this type of play within the classroom teachers may enable the child to explore, while developing strategies to keep the play safe. Further, the educators can attempt to bring superhero play into the curriculum and discuss themes such as fairy tales and folk tales. Parents can encourage their children to engage in play with siblings and peers. The findings of this study have suggested that children who engage in superhero play are capable of incorporating a variety of roles and themes into their play. By providing the children with support and encouragement both teachers and parents can find a middle ground, where children are free to explore the world of make-believe. Through this world of make-believe the children may be able to develop social skills and language by sharing roles and scripts with their peers and taking on different perspectives, hence, empowering the child.

Television and its Implications

Carlsson-Paige and Levin (1990) insisted that children who were avid watchers of violent animated cartoons and television programs were being exposed to a huge risk. They fear that children are unable to detect fact from fantasy and that children may become desensitized to real-life aggression. The children in the current study clearly demonstrated that television viewing was not associated with violent play. Furthermore, the present study did not support Boyatzis's (1997) findings that children imitate their favourite superheroes and use aggression to resolve conflict. These dyads engaged in superhero play with the use of superhero and nonsuperhero characters without violence or aggression.

Conclusion

It is important to note that the sample used in this study consisted of a middle-class population and results should not be generalized to interactions between all male dyads. Nevertheless, consistent results from the study demonstrated that young preschool-aged boys were capable of engaging in various roles and themes with the use of superhero materials. Furthermore, the study also illustrated that superhero play and R&T may be very similar types of play. Findings also suggest that superhero play may not be aggressive in nature, considering that this sample did not exhibit any signs of aggression or violence. Further the results of this sample also, suggest that television viewing does not necessarily direct children towards violence and aggression, nor does it dictate their choice of roles and themes. Whether the child is given a superhero toy or a blanket, children have the cognitive abilities to transform any object through their symbolic play. Thus, a blanket can become a cape just as easily as a doll can become a broom. These overall findings bring strong support to the theoretical concepts of superhero play

advanced by Pellegrini (1998) and Boyd (1997). In addition, parent and educator responses indicate that physically active play, such as superhero play is part of the typical development of the child. Educators and parents caution, however, that supervision and safety be utilised at all times.

Superhero play may provide boys with many opportunities to develop political conceptions of the world, as well as learn about conflict and how to resolve conflict. Furthermore, this type of play permits the child to learn about power through their play. For many, this type of play may serve as a form of play therapy in the sense that children can use their play to work on their own developmental concerns and construct their own understanding of the world.

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Appendix A

Letter to Director of Day Care Center

Date, 2003

Dear Director,

I am a student in the Master of Arts in Child Study program in the Department of Education at Concordia University. As part of my program requirements, I must conduct a research project under the supervision of Dr. Nina Howe. My thesis project focuses on children's physically active play within the classroom. More specifically, the focus is directed towards understanding the possible benefits of physically active play with the use of television vs nontelevision characters. My research question is: What are the effects of television characters on the quantity and quality of boy's imaginative play?

My project was defended, and I have received approval from the Ethics Committee at Concordia University to pursue my project. I am currently searching for boys between the ages of four and five years of age. The project will require that I have a separate space in which to conduct my play session with the children within your establishment. In addition, the project will also require that parents and teachers fill out a short questionnaire pertaining to play preferences and level of physical activity included in the curriculum. The project itself will require male dyads (preferably friends) to participate in two play sessions lasting eight minutes each. The dyad will be given television vs nontelevision characters to play with in order to encourage physically active dramatic play. The play session will be videotaped and the tapes will be coded for roles, themes, quality of pretense as well as level of physically active play. The questionnaires as well as the videotapes will be used to provide a deeper understanding of the purpose of physically active play. This research project will indicate several implications for instructional interventions and may shed light on the importance of such play within the early childhood environment.

In regards to the study, I would request your permission to contact the parents of the children within the specified age range in order to recruit participants for my study. Upon receiving your permission I would progress by sending letters home with the children who meet the requirements to seek parents' permission. Once I have received parental permission, I will meet with each child individually to ask them who they enjoy playing with in the classroom. This will be the basis upon which the play dyads will be determined. I will also need to ask the teachers to answer a short questionnaire pertaining to their beliefs on physically active play within the curriculum.

I would like to thank you for your time and consideration, if you wish to contact me you may do so: (514) 738-3893 or Dr. Nina Howe at: (514) 848-2008. If the project is of interest to you, it would be my pleasure to meet with you and answer any queries you may have.

Amy Parsons

M.A. Child Study
Department of Education
Concordia University
Montreal.

Appendix B
Letter to Teacher

Date, 2003

Dear Educator,

I am a student in the Master of Arts in Child Study program in the Department of Education at Concordia University. As part of my program requirements, I must conduct a research project under the supervision of Dr. Nina Howe. My thesis project focuses on children's physically active play within the classroom. More specifically, the focus is directed towards understanding the possible benefits of physically active play with the use of television vs nontelevision characters. My research question is: What are the effects of television characters on the quantity and quality of boy's imaginative play?

My project was defended, and I have received approval from the Ethics Committee at Concordia University to pursue my project. I am currently searching for boys between the ages of four and five years of age. The project will require that I have a separate space in which to conduct my play session with the children within your establishment. In addition, the project will also require that parents and teachers fill out a short questionnaire pertaining to play preferences and level of physical activity included in the curriculum. The project itself will require male dyads (preferably friends) to participate in two play sessions lasting eight minutes each. The dyad will be given television vs nontelevision characters to play with in order to encourage physically active dramatic play. The play session will be videotaped and the tapes will be coded for roles, themes, quality of pretense as well as level of physically active play. The questionnaires as well as the videotapes will be used to provide a deeper understanding of the purpose of physically active play. This research project will indicate several implications for instructional interventions and may shed light on the importance of such play within the early childhood environment.

In regards to the study, I would request your permission to contact the parents of the children within the specified age range in order to recruit participants for my study. Upon receiving your permission I would progress by sending letters home with the children who meet the requirements to seek the parents' permission. Once I have received parental permission, I will meet with each child individually to ask them who they enjoy playing with in the classroom. This will be the basis upon which the play dyads will be determined. I will ask you to answer a short questionnaire pertaining to your beliefs on physically active play within the curriculum.

I would like to thank you for your time and consideration, if you wish to contact me you may do so: (514) 738-3893 or Dr. Nina Howe at: (514) 848-2008. If the project is of interest to you, it would be my pleasure to meet with you and answer any queries you may have.

Amy Parsons

M.A. Child Study
Department of Education
Concordia University
Montreal.

Appendix C

Letter and Permission Form for Parent/Guardian

Date, 2003

Dear Parent/Guardian,

I am a student in the Master of Arts in Child Study program in the Department of Education at Concordia University. As part of my program requirements, I must conduct a research project under the supervision of Dr. Nina Howe. My thesis project focuses on children's physically active play within the classroom. More specifically, the focus is directed towards understanding the possible benefits of physically active play with the use of television vs nontelevision characters. My research question is: What are the effects of television characters on the quantity and quality of boy's imaginative play?

My project was defended, and I have received approval from the Ethics Committee at Concordia University to pursue my project. I am currently searching for boys between the ages of four and five years of age. I also will need one parent/guardian to fill out a short questionnaire pertaining to your child's play preferences and background information. The questionnaire will be sent home with your child and you will be asked to return the questionnaire as well as the consent form in the envelope provided to your child's day care educator. The project itself will require male dyads (preferably friends) to participate in two play sessions lasting eight minutes each. The play session will be conducted in a separate space within your child's day care setting. The dyad will be given television vs nontelevision characters to play with in order to encourage physically active dramatic play. The play session will be videotaped and the tapes will be coded for roles, themes, quality of pretense as well as level of physically active play. Once I have received your permission, I will meet with your child to ask them who they enjoy playing with in the classroom. This will be the basis upon which the play dyads will be determined. The videotaped play sessions will remain confidential as I will be the only person to view them. The questionnaires as well as the videotapes will be used to provide a deeper understanding of the purpose of physically active play. This research project will indicate several implications for instructional interventions and may shed light on the importance of such play within the early childhood environment.

I thank you for your time and consideration, if you wish to contact me you may do so at: (514) 738-3893 or Dr. Nina Howe at: (514) 848-2008. If the project is of interest to you, and you will provide consent for your child to participate, please return the attached consent form as well as the questionnaire to the teacher in the envelope provided.

Amy Parsons

M.A. Child Study
Department of Education
Concordia University
Montreal

CONSENT FORM FOR THE PARTICIPATION IN A RESEARCH PROJECT

I declare that I consent to participate in the research project led by Amy Parsons and under the supervision of Dr. Nina Howe from the Education Department at Concordia University.

A. GOAL

I have been informed that the goal of this research project is to study boy's physically active play within the classroom. More specifically, the focus is directed towards understanding the possible benefits of physically active play with the use of television vs nontelevision characters. The research question is the following: What are the effects of television characters on the quantity and quality of boy's imaginative play?

B. PROCEDURE

Prior to conducting the research study the parent/guardian will be required to fill out a short questionnaire pertaining to the child's play preferences and background information. The questionnaire will be sent home with the child and the parent/guardian will be asked to return the questionnaire in the enclosed envelope to the child's day care educator. The teacher will also be asked to fill out a short questionnaire pertaining to the level of physical activity within the classroom. The researcher will meet with each child individually to determine who the child enjoys playing with. This will help the researcher determine the play dyad. Once the questionnaires have been filled out and consent is given the study will be able to commence. The project itself will require male dyads (preferably friends) to participate in a warm up activity while the researcher is preparing the video camera. The children will be given a farm set to play with during this warm up period. Once the children appear comfortable with the environment the play session will begin. There will be a total of two play sessions lasting eight minutes each. The play session will be conducted in a separate space within your child's day care setting. The dyad will be given television vs nontelevision characters to play with in order to encourage physically active dramatic play. The child will be videotaped playing with television characters for eight minutes and then they will be videotaped playing with nontelevision characters. The play session will be videotaped and the tapes will be coded for roles, themes, quality of pretense as well as level of physically active play. The videotaped play sessions will remain confidential as the researcher will be the only person to view the cassettes. The videotapes will be used uniquely for the purpose of analysis. The play sessions will require approximately twenty minutes. Each child will be assigned a numerical code to protect their identity.

C. PARTICIPATION CONDITIONS

- I understand that I am free to withdraw my consent and discontinue my participation at any time, without consequence. I understand that my child is free to discontinue participation at any time, without consequence.
- I understand that my participation in this project is **CONFIDENTIAL** (the researcher will know my identity but will not reveal it).
- I understand that the results of this study may be published. If this occurs, only group results will be published and no child will be individually identified.

I HAVE CAREFULLY STUDIED THE INFORMATION ABOVE AND I ACCEPT
AND UNDERSTAND THIS CONTRACT. I CONSENT FREELY AND ACCEPT TO
PARTICIPATE VOLUNTARILY IN THIS STUDY.

NAME (capital letters) _____

SIGNATURE _____

SIGNATURE OF WITNESS _____

DATE _____

Appendix D

Questionnaire for Parent/Guardian

Study on Boys' Physically Active Play
Amy Parsons, M.A. Child Study
Concordia University

Parent Questionnaire

Name: _____

Date: _____

This questionnaire is designed with the goal of determining general demographic as well as personal information on the family of the child participating in the physically active play study.

1. What is your child's name and age?

2. Does your child have any siblings? Please list the gender and age of each.

3. What would you consider your child's favourite activity/ies to be?

4. What type of toys or play materials does your child enjoy playing with? Please check all that apply.

Blocks ☐ Lego ☐ Cars, trucks ☐ Superhero figures ☐ Art materials ☐

Construction toys ☐ Books ☐ Bikes ☐ Pretend play figures ☐

Outdoor climbing equipment ☐ Other _____

5. Are television characters allowed in your home? _____

6. Does your child own superhero toys? If so, please provide a list

7. Does your child engage in play involving television characters? If so, please name the characters _____

8. Does your child engage in physically active play? Yes ___ No ___ If yes, how frequently? Please circle one.

1 2 3 4 5
Never Sometimes Frequently

9. Does your child usually play alone or does he have play partners? (i.e., parents, friends, siblings). Please explain. _____

10. Approximately how much television does your child watch per week?

11. What are your child's favourite television shows? _____
12. What are your child's favourite superhero television shows? _____
13. What are your personal sentiments regarding rough and tumble and other types of physically active play? _____

14. What is your level of education? Please check one.
- | | |
|------------------|--------------------------|
| Some High School | <input type="checkbox"/> |
| High School | <input type="checkbox"/> |
| DEC | <input type="checkbox"/> |
| BA | <input type="checkbox"/> |
| Post BA | <input type="checkbox"/> |
15. Number of years of education? _____
16. Please describe your job title? _____
17. What are the language(s) spoken at home? _____
18. In what country were you born? _____
19. In what country was your child born? _____

Thank you for your participation!

Appendix E
Questionnaire for Teacher

Study on Boys' Physically Active Play
Amy Parsons, M.A. Child Study
Concordia University

Teacher Questionnaire

Name of Daycare: _____

Age of Children in Classroom: _____

1. Are the children in your classroom permitted to engage in physically active play? Why or why not?

2. How frequently would you say that boys engage in physically active play within the classroom? Please circle one.

1	2	3	4	5
never		moderately		frequently

3. Does your classroom have items available that would elicit physically active play such as superhero figurines, dramatic play props? Please list a few.

4. How important do you consider physically active play within the curriculum? Please circle one.

1	2	3	4	5
not important		moderately important		very important

5. Where do you believe children should have the opportunity to engage in physically active play? Check all that apply.

Indoors ☐

Outdoors ☐

6. What are your beliefs about physically active play in the classroom, for example superhero and rough and tumble play?

7. What is your level of training?

Less than DEC ☐

Attestation ☐

DEC ☐

Some University ☐

BA ☐

Post BA ☐

8. Number of years of education? _____

9. What is your mother tongue? _____

10. What is your country of origin? _____

Thank you for your participation!

Appendix F

Verbatim Instructions to Dyad

Verbatim instructions

1. Familiarization (warm-up) with farm set:

“Please sit down on the carpet with your play partner, I have brought a fun game that you can play with while I set up my video camera. Before you start to play I am going to ask you to look in the camera and say your name and then repeat the number I give you. Good, now I am going to record you while you play, but I will be the only person to see the tapes. I also want you to know that you are free to leave at any time, you just need to let me know. Let’s have some fun together. Here is a farm set for you to play with for a few minutes while I play with the camera.”

2. Transition:

“Okay partners, I am now going to ask you to put the farm set away, I will help you. Alright, I have with me some different toys for you both to play with. I am going to place them over here on the carpet. When I am done I will go back to the video camera and explain to you what to do next.”

3. First Play Session:

“Thank you for being so patient. Now you can see that I have given you a lot of toys to play with on the carpet. You can play with the toys any way that you want, the only thing that I ask is that you play safely and that you stay on that side of the camera. Pretend as though I am not here. When the time is up I will tell you. Have fun.”

4. Transition:

“Okay boys, your time is up for the first play session. I will ask you to put the toys in this bag that I have brought with me. While you are putting the toys in the bag I will set up the toys for the next session.”

5. Play Session Number Two:

“Alright, thank you for your help. Now we are going to do the same thing as before. I have placed new toys for you to play with on the carpet. So you and your play partner can play with anything you want, I only ask that you play safely and that you stay on that side of the camera. Have fun, and I will tell you when the time is up.”

6. End of Session:

“Wow, you really played well together today. Did you have fun? Okay, could you help me put the toys back into this bag please and then I will take you back to your classroom.” (If at any time an aggressive interaction occurs the researcher will intervene).

Appendix G

Description of Type of Roles

Type of Roles enacted- Garvey and Berndt (1975) and McLoyd (1983).

- **Functional:** Child assigns or enacts a role organized by object or situation (e.g., child says object is a plane so makes it fly/could say he/she is fixing something, repairing it).
- **Familial/Relational:** Child assigns or enacts a familial role using a figure (e.g., Mother, father, sister, brother). Or child assigns a non-familial relationship using a figure (e.g., friend comes over to play).
- **Character/Fictive:** Child assigns or enacts role in which the figure's main characteristic is stereotypical or fictive involving combat, use of voice intonation to represent character of choice (e.g., Spiderman or Batman) or ex: "He's the nice guy okay? I'm Batman".
- **Peripheral:** Child assigns a role that is discussed but not enacted (e.g., imaginary friend, or assigns role of mother to peer but is not enacted, or "let's fly" or "let's be").
- **Occupational:** Child assigns or enacts role characterized by its occupation to a figure (e.g., doctor, nurse, teacher).
- **Other Role:** Child assigns or enacts a role to a figure not described in the previous categories (e.g., animal, automobile).
- **No Role:** Child does not assign or enact a role during play sequence.

Appendix H

Description of Variety of Themes

Description of Variety of Themes

Derived from Garvey and Berndt (1975), McLoyd (1983), and Carlsson-Paige and Levin (1990).

- **Nurturing/caring:** Child uses figure to describe or enact an act of nurturing or caring for an individual or pet (e.g., sister cares for sibling who is not feeling well, nurse cares for patient).
- **Domestic/housekeeping:** Child uses figure to describe or enact a cooking, cleaning, shopping and familial sequence (e.g., mother/father cooking dinner, father figure).
- **Action/battling/averting threat or danger:** Child uses figure to describe or enact a dangerous, fighting, killing, dying sequence (e.g., Spiderman fights with enemy and entangles him/her in his web until death prevails). Lots of action (e.g., humming tunes, flies character, super powers, "I used my powers to hurt you" or "you're dead."). Action occurring, but does not have to be constant fighting.
- **Building:** Child uses figure to describe or enact theme involving construction or building with a purpose (e.g., building a cave for Batman, building a lair for the Power Rangers). Can also include building specific pieces for a character.
- **Performing:** Child uses figures to describe or enact artist, singer, actor/actress (e.g., uses figure to depict a Popstar, or painter).
- **Capture and rescue:** Child uses figure to describe or enact a sequence that involves plots, threats, good vs. evil (e.g., Spiderman captures Green Goblin- no killing, cops and robbers, catching Spiderman).

- **Submit or vanquish:** Child uses figure to describe or enact a sequence involving submission or defeat (e.g., Batman gives himself up to Mad Hatter or Mad Hatter gains control of Batman and Robin, or use of a potion to vanquish).
- **Attack or flee:** Child uses figure to describe or enact sequence where the figure must use force to succeed or to flee (e.g., Spiderman must use powers such as his web to overthrow enemy, in order to escape, "you're going to get it," or "come and get me," or "catch me if you can").
- **Other Theme:** Child uses figure to describe or enact a theme sequence that is not described in the above categories (e.g., girl goes skating with a friend).
- **No Theme:** Child does not describe or enact a theme during the play sequence.

Appendix I

Description of Level of Physically Active Play

Levels of Physical Activity Associated with Play

This measure was be used to assess the level of physical activity that the dyad engaged in on a scale of one to five during every 15-second interval.

Scale:

1-None: No physical activity within the dyad; figures are not manipulated. The children are not using gross or fine motor skills.

2-Low: Fine motor movement use of arms and fingers to manipulate figures, however there is no sign of gross motor activity. For example, child can already be standing, not walking.

3-Moderate: Level of physical activity involves table-top play, non-stationary, lots of fine motor movement and manipulation of characters. Little if any gross motor play. The child may change location infrequently. For example, standing up, changing sitting position, taking a step forward or backward.

4-Frequent: The child changes play location frequently walking, whole body movements and gestures with or without the use of the figurine. For example, not just standing up and taking a step, child is walking, using the whole body.

5-High: Intense locomotor activity, lots of whole body movement such as, running, swinging, wrestling, and tumbling. zooming, kicking, the dyad does not have to be running but can involve running, hopping, sliding.

Appendix J

Description of Aggression

Description of Aggression

Definitions:

Aggression: was operationally defined for the purpose of this study as either:

- a) Verbal: speaking or yelling in an insulting or threatening manner with the intent to harm.
- b) Physical: hitting, shoving, kicking, and tripping other children, with the intention to harm.

Use of Aggressive Play Object: use of guns, swords and other weapons in play.

Behaviours that are recorded as accidents will not be considered as aggression.

Appendix K

Coding Schemes for Themes, Roles, and Level of Physical Activity and Aggression

Coding Sheet for Type of Theme (Time Sampling)

A) Observer looked for a thematic sequence and actions, not character roles. Therefore, themes are determined by the actions of characters (what they do) not their names (roles).

Be certain to code all themes that emerge for the dyad.

B) When coding if two different themes emerge the coder must decide (nurturing vs. domestic) upon the predominant theme in terms of time elapsed within the 15-second interval. If two themes of equal value length and equal importance occur then code the theme that occurred first. However, the coder should code the theme that predominates (e.g., the one with the longest duration). Also in order to code for a theme it must occur for at least 4 seconds of the 15-second interval.

C) If a situation arises where the coder must decide between a predefined theme and no theme, always choose the predefined theme even if the time duration does not exceed 4 seconds. However, if throughout the 15 second interval no theme is evident then the coder must code this as no theme.

D) Even if predefined theme occurs for only a few seconds always code over other theme.

Themes

Nurturing/Caring: Child uses figure to describe or enact an act of nurturing or caring for an individual or pet (e.g., sister cares for sibling who is not feeling well).

Domestic/Housekeeping: Child uses figure to describe or enact a cooking, cleaning, shopping and familial sequence (e.g., mother/father cooking dinner, father figure).

Action/Battling: Child uses figure to describe or enact a dangerous, fighting, killing, dying sequence (e.g., Spiderman fights with enemy and entangles him/her in his web until death occurs). Lots of action (e.g., humming tunes, flies character, super powers. "I used my powers to hurt you." or "You are dead." doesn't have to be fighting).

Building: Child uses figure to describe or enact theme involving construction or building with a purpose (e.g., building a cave for Batman, building a lair for the Power Rangers).

Can also encompass building pieces for specific characters.

Performing: Child uses figures to describe or enact artist, singer, or actor/actress (e.g., uses figure as a Popstar, or painter).

Capture and Rescue: Child uses figure to describe or enact a sequence that involves plots, threats, good vs. evil (e.g., Spiderman captures Green Goblin-no killing, cops and robbers, catching Spiderman).

Submit or Vanquish: Child uses figures to describe or enact a sequence involving submission or defeat (e.g., Batman gives himself up to Mad Hatter or Mad Hatter gains control of Batman and Robin).

Attack/Flee: Child uses figure to describe or enact sequence where character must use force to succeed or to flee (e.g., Spiderman must use powers such as his web to overthrow enemy-in order to escape/ "You're going to get it," or "come and get me," or "catch me if you can").

No Theme: Child does not enact a theme sequence. However, if a theme does occur for only 1 second of the interval, then choose the theme for coding purposes.

Other Theme: Child uses figures to describe or enact a theme sequence not described in above categories (e.g., girl goes shopping with her friends).

Derived from Garvey and Berndt (1975), McLoyd (1983), and Carlsson-Paige and Levin (1990).

Type of Role (Time Sampling)

- A) Observer is to look for character roles (names) that the dyad engages in throughout the play sequence. Please be certain to record all roles.
- B) When coding for roles, if there are two different roles per interval, then the coder must decide (functional vs. familial) upon the predominant role in terms of the time elapsed within the 15-second interval. If two roles of equal importance emerge, then code the role that occurred first during the sequence. However, only code if the role lasts for 4 seconds in duration.
- C) If a situation arises where the coder must decide between one of the six predefined roles and no role, always try to code for the role even if it does not occur for the majority of the time sequence.
- D) If none of the 6 predefined roles are performed by the figure within the interval, but a role does occur then please label this as other role and explain what occurred.

ROLES

Functional: Child assigns or enacts a role organized by object or situation (e.g., child says object is plane so makes it fly/could say he is fixing something, repairing it).

Familial/Relational: Child assigns or enacts a familial role using a figure (e.g., Mother, father, sister, brother). Child assigns a non-familial relationship using a figure (e.g., friend comes over to play).

Character/Fictive: Child assigns or enacts role in which the figure's main characteristic is stereotypical or fictive involving combat, use of voice intonations (e.g., Spiderman, Batman) or ("he's the nice guy okay? I'm Batman").

Peripheral: Child assigns a role that is discussed but not enacted (e.g., imaginary friend/ or let's fly or let's be").

Occupational: Child assigns or enacts a role characterized by its occupation to a figure (e.g., doctor, teacher).

Other Role: Child assigns or enacts a role to a figure not described in the previous categories (e.g., animal, automobile).

No Role: Child does not assign or enact a role during play sequence.

Derived from Garvey and Berndt (1975), and McLoyd (1983).

Level of Physical Activity Associated With Play (Rating Scale)

A) Observer is to look for the level of physical activity within the dyad. Please be certain to record any activity that occurs during the intervals.

B) When indicating level of physical activity if there are two different levels per interval, the coder must decide (Low vs. Moderate) on the predominant level in terms of time elapsed within the 15-second interval. Choose the level that occurs for the greatest amount of time. If they occur for equal time intervals then choose the level that occurred first during the time frame.

LEVELS

1-None: No physical activity within the dyad; figures are not manipulated. The children are not using gross or fine motor skills.

2-Low: Fine motor movement-use of arms and fingers to manipulate figures, however there is no sign of gross motor activity. For example, child can already be standing, not walking.

3-Moderate: Level of physical activity involves table-top play, non-stationary, lots of fine motor movement and manipulation of characters. Little if any gross motor play. The child may change location infrequently. For example, standing up, changing sitting position, taking a step forward or backward.

4-Frequent: The child changes play location frequently walking, whole body movements and gestures with or without the use of the figurine. For example, not just standing up and taking a step, child is walking, using the whole body.

5-High: Intense locomotor activity, lots of whole body movement such as, running, swinging, wrestling, and tumbling, zooming, kicking, does not have to be running but can involve running, hopping, sliding.

Measure of Physical and Verbal Aggression

This was used to measure the frequency of the occurrence of aggressive behaviour. This also included a frequency count of war materials incorporated into play such as guns, swords.

Definitions:

Aggression: was operationally defined for the purpose of this study as either:

- a) Verbal: speaking or yelling in an insulting or threatening manner with the intent to harm.
- b) Physical: hitting, shoving, kicking, and tripping other children, with the intention to harm.

Use of Aggressive Play Object: use of guns, swords and other weapons in play.

Behaviours that are recorded as accidents will not be considered as aggression.