Peer Victimization and Children's Internalizing Problems: Linking Teacher-Child Relationship

Quality and Child Gender to Early Child Behaviour Adjustment

by

Marissa Rae Zerff

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Abstract

This study utilized longitudinal correlational and regression analyses to examine children's internalizing behaviour problems, while focusing on the predictive function of peer victimization, the quality of the teacher-child relationship and child gender in early school years. Given the relationship between peer victimization and internalizing problems, the teacher-child relationship and gender was hypothesized to influence the strength and/or direction of this relationship. Participants included children in pre-kindergarten ($n = 258$) to grade one ($n = 272$) from twelve schools in an Australian city. Parent reports were used to assess child internalizing problems and peer victimization, and teachers reported on the teacher-child relationship and peer victimization. A significant main effect was found for child gender and kindergarten teacher-child conflict on internalizing behaviours in grade one, whereas no main effect was found for grade one internalizing behaviours for parent-rated peer victimization and teacher-child warmth. The quality of the teacher-child relationship was not found to moderate the relationship between peer victimization and internalizing problems, while child gender did moderate the influence of teacher-child relationship conflict on internalizing problems a year later. The results of the present study indicated that the relationship between teacher-child conflict and internalizing problems a year later differs for boys and girls. The importance of specific microsystems (i.e., teacher-child relationships) over time on children's behavioural development is discussed, and implications for future research and teacher-child interventions are presented.

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Chapter 1

Introduction

Schools are a great forum for observing and addressing developmental problems, as schools are the first structured social context outside the family that many children experience. In order to succeed in school, children need to learn to adapt to the school setting, learn to control or show appropriate behaviours and emotions, and form relationships with teachers or peers, which are all developmentally important. Early childhood is recognized as a period in which social processes play key roles in a child's overall adaptation (e.g., Pianta, 1997), and schools are seen as significant socializing contexts for children's behavioural and social development (Bronfenbrenner, 1979).

A number of children encounter social difficulties within school settings, such as problems with peers and teachers, which can have detrimental effects on their overall development. For some children, these social difficulties can be even more challenging to navigate and have adverse effects on the child's behavioural development (i.e., internalizing behaviours), especially when there is relational negativity or conflict. Internalizing problems affect approximately fifteen percent of children between the ages of eighteen months to five years (Bayer, Ukoumunne, Mathers, Wake, Abdi & Hiscock, 2011), making internalizing problems one of the most common disorders among young children (Zahn-Waxler, Klimes-Dougan & Slattery, 2000). Children with internalizing behaviour problems tend to withdrawal from social situations or become overwhelmed by new environments, causing them to have trouble forming relationships that may help them adjust to the social school setting (Coplan & Arbeau, 2008; Leadbeater & Hoglund, 2009).

Internalizing problems may also arise from, or be exacerbated by, school social processes. For instance, peer relationships characterized by harassment and victimization have

been acknowledged as a predictor of internalizing problems (Reijntjes, Kamphuisb, Prinziea, & Telch, 2010; Zwierzynska, Wolke, Lereya, 2013). Additionally, the school context is primarily where peer victimization begins and occurs, and such victimization can have serious consequences for children's developmental outcomes, and contribute to the onset or exacerbation of children's internalizing problems (Hawker & Boulton, 2000; Reijntjes et al., 2010; Zwierzynska et al., 2013).

The negative consequences associated with peer victimization are well documented. Most children will be victimized at some point within their school years, but only a subset are continuously chronic victims (Perry, Hodges & Egan, 2001). Most victimization decreases throughout elementary school, but cases of chronic victimization may in part be due to the perpetrator(s) gaining some type of pleasure or reward from victimizing that specific child (Smith, Shu, & Madsen, 2001). Knowing the outcomes of victimization is imperative, with one of the most cited consequences of victimization being internalizing problems and distress (Hawker & Boulton, 2000).

Of equal importance is being able to identify factors that can moderate the impact of peer victimization on children's socio-emotional well-being (Troop-Gordon & Quenette, 2010), such as protective processes, which can then be focused on in interventions (e.g., the development of a close teacher-child relationship). But as of yet there are few studies that have looked at mechanisms that may safeguard bullying victims from negative outcomes, particularly the mechanism of socially supportive relationships (Davidson & Demaray, 2007; Demaray & Malecki, 2003). Positive relationships with non-family adults have been viewed as a protective factor for children with behaviour problems (Baker, Grant & Morlock, 2008), and as a buffer against the development of maladjusted behaviour problems (Stuhlman & Pianta, 2001). Over the years, there has been increasing evidence for the influence of the peer group on the

behaviour and psychological development of children and adolescents (Bronfenbrenner, 1970). Yet, the relationship between teachers and students, and how this may play a role in the child's behavioural development and social experiences (Farmer, McAuliffe Lines & Hamm, 2011; Pianta, 1997) has not been fully elucidated.

Recently, researchers have started to investigate and reveal the "invisible hand" and role of the teacher in children's peer relations, social classroom dynamics, and children's academic, emotional and behavioural growth (Farmer et al., 2011). The relationship a child forms with a teacher in the early years is associated with the formation of competent relationships with peers and subsequent teachers (Birch & Ladd, 1998; Howes & Hamilton, 1993; Howes et al., 1994; Stuhlman & Pianta, 2001). Children's relationships with teachers may provide insight into how the teacher-child relationship quality can influence the association between being victimized and levels of internalizing problems. Research has shown that the teacher is an influential figure in the classroom; therefore, having a close or conflictual relationship with one's teacher may have the potential to generate positive or negative effects on the classroom ecology, peer relationships, and level of internalizing problems in young children. The teacher-child relationship in the early school years (i.e., preschool to grade one) may be particularly significant for a child's social and behavioural development as children are just learning to navigate the social world of the classroom (e.g. Bierman, 2011; Hamre & Pianta, 2001). Very few studies however have looked at the intricate and somewhat complicated nature of the school ecology, and how it particularly affects a child's internalizing problems in primary-aged children.

The limited attention paid to preschool and kindergarten age groups in regards to internalizing problems is conceivably due to these behaviours being viewed as unstable at this early age, and difficult to detect. Recent studies, however, have shown both to be untrue (e.g.

Carter, Briggs-Gowan, Jones, & Little, 2003; Carter, Godoy, Wagmiller, Veliz, Marakovitz, & Briggs-Gowan, 2010; Egger). Carter and colleagues (2003, 2010) have confirmed that internalizing problems at a young age (1 to 3 years of age) can be reliably identified, which was also confirmed by Egger et al. (2006) for children aged 2 to 5 years. Additionally, internalizing problems, as reported by parents, have exhibited stable and coherent patterns at this early age (Carter et al., 2003, 2010). Furthermore, the quality of the teacher-child relationship has been related to several aspects of short-and long-term school adaptation (e.g., Birch & Ladd, 1998; Pianta, 1997; Pianta & Steinberg, 1992), and behaviour problems (Henricsson & Rydell, 2004), yet no study to my knowledge has looked at the teacher-child relationship quality (i.e., conflict or closeness) as a possible moderating factor between peer victimization and internalizing problems. Examining peer victimization in regards to the quality of the relationship between the teacher and child, and the outcome of internalizing behaviours is a means to further the understanding of the consequences of peer victimization, and to assist in the development of intervention programs for peer victimization and internalizing behaviour problems.

In addition, few studies have looked at gender as a child characteristic that could be a moderating variable between victimization, the teacher-child relationship and internalizing problems. Gender is undoubtedly a child characteristic that can affect how one reacts to and perceives a stressful life event (i.e., peer victimization or conflict in the teacher-child relationship), which consequently could impact the child's level of internalizing problems. Gender differences in the early primary years have had inconsistent and contradictory findings in regards to internalizing behaviours (e.g., Bongers et al., 2003; Olsen & Rosenblum, 1998), peer victimization (e.g., Bauman, 2008; Slee, 1995; Storch, Nock, Macia-Warner & Barlas, 2003), and teacher-child relationship quality (e.g., Hamre & Pianta, 2001; Koepke & Harkins, 2008), which is why there is a need for further investigation to disentangle the discrepancies.

The growing body of literature from developmental and educational psychology concurs that early school success is contingent upon behavioural, emotional, and social competencies. Inherent in the development of these competencies is the contribution of early relationships (i.e., teacher and peer). Given the complexity of numerous variables impacting a child's development in the school environment, the goal of this study is to examine the potential of peer victimization and the teacher-child relationship in determining children's internalizing behaviours, while investigating the main effects of peer victimization and the teacher-child relationship quality on internalizing behaviours, and further examining the teacher-child relationship as a possible protective (e.g., closeness) or amplifying factor (e.g., conflict) between peer victimization and internalizing problems. Furthermore, child gender will be examined as another possible moderator between victimization, the teacher-child relationship and internalizing problems. Examination of this issue is essential for bridging the gap between the individual microsystems (e.g., teacher-child and peer-child relationships; the mesosystem) surrounding the child, and to obtain a better understanding of the extent that the qualities of such relationships have on young children's internalizing tendencies. Additionally, understanding the inter-relations between the individual and his/her ecology is important for the development of effective intervention programs for those being victimized, experiencing conflict in the teacher-child relationship or who have internalizing problem behaviours.

Purpose of the study

Considering the developmental importance of social relationships within the school ecology for overall development, the purpose of the current study is to clarify the longitudinal relations between peer victimization, teacher-child relationship quality, child gender and internalizing problem behaviours in primary-aged children. A correlational design and regression analysis will be used to assess peer victimization, the quality of the teacher-child relationship and gender, and to examine how these variables contribute to the changes in

internalizing problems over time for early elementary-aged children. Specifically, this study will use the Ecological Theory of Development as a theoretical framework to investigate: (a) peer victimization as a predictor of internalizing problems, (b) the influence that the quality of the teacher-child relationship has on internalizing problems, (c) the teacher-child relationship as a moderating influence between peer victimization and the level of internalizing problems, (d) the moderating influence that child gender has on the relation between the quality of the teacher-child relationship and internalizing problems, and (e) the moderating influence of child gender between peer victimization and internalizing problems.

Chapter 2

Literature Review

Overview

The following review presents a theoretical foundation for the conceptualization of teacher and peer roles in the development of children's internalizing behaviours. There will be further investigation of the relationships between peer victimization, the teacher-child relationship and gender to examine the different mechanisms that affect young children's internalizing problems. Key findings of research examining internalizing problems, peer victimization, the teacher-child relationship, and the role of child gender are described. Furthermore, the implications of this research for the relationship among peer victimization, the quality of the teacher-child relationship, gender and internalizing problem behaviours will be discussed.

Theoretical foundations

It seems plausible to suggest that socio-emotional development derives from the interaction of intra-individual, inter-individual, and environmental forces and experiences impinging on the child (Rubin & Mills, 1991). Although the family is often seen as the principal context in which development takes place, it is but one of several settings in which development can and does occur (Bronfenbrenner, 1986). The recognition that child development has multiple contributors at multiple levels of the child's social ecology, and the dynamic relations between levels and settings has been recognized by the Ecological Theory of Development (Bronfenbrenner, 1979, 1986). This framework takes into account the complexity of numerous variables impacting human development, and characterizes human development as the result of interactions between individuals and social contexts (Bronfenbrenner, 1979). The Ecological Theory of Development seemed best suited for a study of this nature, as it will be looking at change over time within and between social contexts (i.e. peers and teachers).

The ecological model emphasizes the contribution of multiple variables that affect multiple domains of a child's development, and allows for a social ecological analysis of numerous settings and systems (Bronfenbrenner, 1979). As presented by Bronfenbrenner (1979), the world of the child consists of five systems of interaction: (1) Microsystem, (2) Mesosystem, (3) Exosystem, (4) Macrosystem, and (5) Chronosystem, and each system comprises the contextual nature of the person's life and offers a diversity of sources for developmental growth. This model views development as the result of an individual's transactions within and across these multiple systems, and illustrates the "dynamic, developmental relations between an active individual and his or her complex, integrated, and changing ecology" (Lerner, Lewin-Bizan, & Warren, 2011, pg. 27). Bronfenbrenner (1977, 1986) states the pertinence of examining the mesosystem: that is, the joint impact of interactions between settings and systems (i.e. the peer group and the teacher) on developmental outcomes (i.e. internalizing problems). Therefore, this model hypothesizes that relationships in one domain influence relationships in another domain, and has consequent behavioural and developmental implications (Bronfenbrenner, 1977).

Since children have access to these multiple systems they potentially have numerous possibilities for learning problem solving skills, to attain social knowledge and to learn appropriate behaviour, or if these systems are characterized by negativity and conflict, they may acquire maladjusted problem solving skills, social knowledge and behaviours (Swick & Williams, 2006). The school setting, and the daily interactions during the school year between teachers, peers, and individuals, makes peers' and teachers' attitudes, behaviours and involvement important predictors of problem behaviours in children, thereby warranting the investigation of these individual microsystems as they are interrelated and each affect each other (i.e., the mesosystem).

The Ecological Theory of Development can potentially assist in understanding the systems that affect development between peers, between teacher and peers, between the teacher and child, and between home and school contexts. It can also possibly provide better understanding of the possible constructs that may buffer victims from negative outcomes. The Ecological Model may aid in conceptualizing how peer victimization, or the quality of the teacher-child relationship over time affects children's behavioural outcomes, but also how the teacher-child relationship and individual child factors (i.e., gender) may amplify or mitigate (i.e., moderate) children's internalizing problems.

Moderator interpretation and explanation

A moderator is a variable that affects the direction and/or strength of the relation between a predictor variable and a dependent variable (Baron and Kenny, 1986), and specifies when or under what conditions a predictor variable influences a dependent variable (Baron & Kenny, 1986; Holmbeck, 1997). A moderator variable may reduce or enhance the strength of the relationship between a predictor variable and a dependent variable, or it may change the direction of the relationship between the two variables from positive to negative or visa versa (Baron & Kenny, 1986).

Furthermore, moderator hypotheses allow for the testing of protective (buffering) or exacerbating (enhancing) effects of a third variable, which is a pertinent aspect of the present study. Protective factors are those conditions that may possibly reduce the impact of risk factors on adjustment outcomes, and exacerbating factors are those that may also affect the impact of risk factors by enhancing maladjustment (Henricsson & Rydell, 2006). Moderator models are one way to clarify the relations between protective and exacerbating factors in the development of internalizing problem behaviours. It was felt due to the conceptual nature of the study and substantive concern with the buffering effects of the teacher-child relationship and difference

between boys and girls in regards to the variables in the present study, that moderator analysis was better suited and needed to be tested in the investigation of the research questions.

Internalizing problems in childhood

Research on young children's internalizing disorders has progressed rather slowly, as internalizing problems tend to be viewed as less problematic than externalizing behaviours by parents, teachers, and other caregivers, which is presumably related to the fact that such disorders are most often characterized by quiet, internal distress rather than overtly, socially negative, or disruptive behaviour that characterizes externalizing behaviours (Tendon, Cardeli, & Luby, 2009). Most commonly, children's internalizing problems are investigated from middle to late childhood onward, which leaves a gap in the literature in regards to early development of internalizing problems. The preschool and primary years are an important age range to study as this is a time of major and swift developmental and contextual change in to the school ecology, and is often the first time in a child's life in which overt structure is imposed on them, they have to behave in socially acceptable ways, relate to others socially, and conform to the authority of other adult figures (Egeland, Kalkoske, Gottesman, & Erickson, 1990). It is during this time that the development and maintenance of internalizing behaviour problems may become most evident, as well as these new contextual, environmental, and social factors affecting the development of internalizing problems.

Definition of internalizing problems. Internalizing disorders are signified by intropunitive emotions and moods characterized by feelings of sorrow, guilt, anxiety, loneliness, and behaviours manifesting as withdrawal, shyness or somatic complaints (i.e. aches, pains, nausea, dizziness) (Achenbach, 1991; Coplan & Armer, 2007; Coplan & Arbeau, 2008; Henricsson & Rydell, 2006; Zahn-Waxler et al., 2000). Internalizing disorders are directed inward and are indicative of a child's psychological and emotional state (Liu et al., 2011), and often viewed as a psychological overcontrol problem (Kovacs & Devlin, 1998; Rubin & Mills,

1991).

Prevalence. Early childhood has been characterized as a common period of onset. In particular, anxiety, withdrawal problems and depressed behaviour become evident during the transition to child care or preschool, with such behaviours being relatively stable from early to late childhood (Mesman, Bongers, & Koot, 2001; Olsen & Rosenblum, 1998). As a whole, internalizing behaviour problems are among the most common difficulties of early childhood, affecting approximately fifteen percent of children between the ages of eighteen months to five years (Bayer, Ukoumunne, Mathers, Wake, Abdi & Hiscock, 2011; Zahn-Waxler, Klimes-Dougan & Slattery, 2000). When looking at discrete subclasses under internalizing behaviours, anxiety has been found to affect 6 to 20% of young children, with anxiety prevalence having higher rates with age. It has been reported that estimates of anxiety disorders affect approximately 12.3% of children between 6 and 12 years (Costello et al., 2011), with estimates of 9.4% for children between the ages of 2 to 5 years old (Egger & Angold, 2006b; Sterba, Egger & Angold, 2007). Egger and Angold's (2006a) study found that 4- and 5-year-olds were significantly more likely than 2- and 3-year-olds to have an anxiety disorder (11.9% vs. 7.7%). Somatic complaints affect an even greater proportion of children at approximately 20 to 40%, with 40% of participants reporting symptoms prior to age 10 and 55% reporting symptoms at age 15 or earlier (Bass & Murphy, 1995). Depression, on the other hand, appears to be less prominent in younger-aged children but depression has been noted to have a prevalence rate between 1-2% in young primary year children (aged 2-5), with depression rates increasing with age (i.e., older elementary children with higher rates than toddlers and preschoolers) (Angold, Egger, Erkanli & Keeler, 2005; Egger, Erkanli, Keeler, Potts, Walter & Angold, 2006), and rates as high as 15-20% between 15 and 18 years of age (Lewinsohn, Clarke, Seeley, & Rohde, 1994).

Most often if a person has one of these disorders they frequently have comorbid symptoms (i.e., anxiety and depressive symptoms, anxiety and other affective symptoms; Last, Strauss & Francis, 1987; Costello, Egger & Angold, 2005; Kovacs, Feinberg, Crouse-Novak, Paulauskas & Finkelstein, 1984; Simon & Von Korff, 1991). An overarching general "higher order", non-specific label termed internalizing disorders deals with comorbidity between mood and anxiety disorders, and links these mood and anxiety disorders as subclasses under the internalizing dimension (Watson, 2005). A problem with research on internalizing problems is that researchers often separate out internalizing-like constructs (i.e. depression, anxiety, social withdrawal, shyness), which may only give a partial picture of the effects of internalizing problems or use different measures, consequently having implications for comparison between studies (e.g. Gazelle & Ladd, 2003; Rubin, Coplan, & Bowker, 2009; Zahn-Waxler et al., 2000). However, findings from such studies are still beneficial in understanding the extent and mechanisms that contribute to internalizing problems, but they may miss looking at other characteristics that affect children, such as somatic complaints, which is why the broad internalizing behaviour construct is important to study.

As noted, the age of onset of these disorders tends to be within the preschool years, with stability and persistence of such internalizing problems being noted by researchers (e.g., Briggs-Gowan, Carter, Booson-Hennan, Guyer & Horwitz, 2006; Luby, Heffelfinger, Mrakotsky, Hessler, Brown & Hildebrand, 2002). For example, Briggs-Gowan and colleagues (2006) found internalizing behaviours to persist for 37.8% of a population-based birth cohort of 1 to 3 year olds over 1 year. Furthermore, preschoolers with internalizing disorders assessed in a general population cohort at ages 2 and 3 years have been noted to have three-times the risk for similar internalizing psychopathology eight years later based on parent interviews (Briggs-Gowan et al., 2006).

Despite their salience in childhood, relatively little is known about the early

development of internalizing problems. The paucity of research on this issue may reflect assumptions that emotional problems are relatively rare, and short-lived, in early childhood (Olsen & Rosenblum, 1998), even though internalizing problem behaviours have shown stability, and a relation to serious problems (i.e., major depressive disorder, suicidal ideation) later in life (e.g., Liu et al., 2011; Zahn-Waxler, et al., 2000).

O'Connor, Dearing and Collins (2011) found children who had high levels of internalizing behaviours in first grade evidence a marked increase in internalizing symptoms over the course of elementary school. This study looked at children up until fifth grade, in which children were categorized into groups depending on their first grade internalizing behaviour scores (i.e. very-low, low, moderate, high). Children who had high levels of internalizing behaviours (approximately 18 points above average norms) in first grade had internalizing problems that gradually increased into middle childhood. They further note that internalizing behaviours may continue to increase into later middle childhood and early adolescence as individuals approach more challenging and stressful transition points in development and school environment, with internalizing problems tending to peak between the ages of 15-16 years (e.g., Perry & Pauletti, 2011; Walker, Nishioka, Zeller, Severson, & Feil, 2000).

Sterba, Prinstein and Cox (2007) found similar results and differing trajectories of internalizing behaviour problems starting with a younger age group. In the population of children aged 2 to 11 that were recruited, they found that a group showed elevated-stable symptoms (13% of boys, 21% of girls), and others showed decreasing and then increasing symptoms by age 11 (22% of boys, 10% of girls). Those children in the elevated-stable, and decreasing/increasing groups were more likely to be in the clinical range of the Children's Depression Inventory (CDI) at age 11. The study sheds light on the sequelae of internalizing

problems, as this community-sample of young children who showed relatively high levels of internalizing problems had symptoms that progressively worsened to be within clinical range with increasing age. Gilliom and Shaw (2004), with a sample of boy participants, found that internalizing problems gradually increased between the ages of 2 to 6 years. Furthermore, Achenbach, Howell, Quay, and Conners (1991) compared children between the ages of 4 to 16, and found that among clinically referred children, internalizing problems (somatic complaints, withdrawal, anxiety, and depression) also tended to increase and persist with age.

The long-term maintenance and sequelae of internalizing problem behaviours is evident based on the noted past research, but there is still a need for longitudinal studies, and investigation of predictive contextual (i.e., school ecology) and child factors (i.e., gender) that affect internalizing difficulties. Risk and protective factors for the development of internalizing behaviours need to be studied in order to understand how children develop such a behavioural problem. Failure to intervene at an early age may have long-term detrimental effects for an individual as the above studies have exhibited the growth of internalizing problems with age, which further elucidates the need for early intervention strategies, and the finding of protective factors that can improve developmental outcomes.

Environmental risk and protective factors

There is no doubt that genetic and biological determinants do affect the presentation of internalizing disorders, but environmental and social risk and protective factors have also been identified as mechanisms that affect internalizing problems (e.g., Anan & Barnett, 1999; Arbeau et al., 2010; Birch & Ladd, 1997; Hamre & Pianta, 2001; Ladd & Burgess, 2001; Liu et al., 2011; Rubin, Coplan, Chen, Bowker & McDonald, 2011). Research has noted the relationship between the child and their environment (i.e., temperament, family factors, socioeconomic status) as joint contributors affecting internalizing behaviour problems (e.g., Ashford, Smit, van

Lier, Cuijpers & Koot, 2008; Mills, Hastings, Helm, Serbin, Etezadi, Stack, Schwartzman & Li, 2011; Zahn-Waxler et al., 2000), but how these factors interact to increase or decrease the risk of these problems and the processes through which these problems develop are not well understood. For the most part this may be attributed to the lack of research taking into account multiple factors simultaneously interacting to affect early childhood internalizing problems.

A study done by Ashford and collegues (2008) showed that internalizing problems are identifiable at a young age, and predictors from as early as 2–5 years of age are strongly foretelling of internalizing problems at age 11. They found that the risk indicators of low SES, parenting stress, family psychopathology and previous internalizing problems predicted 57% of variance in later internalizing problems at age 11. They looked at numerous predictive factors for internalizing problems in young children and studied the amount of health gain, which notes the improvement of internalizing symptoms (i.e., measured by statistical analysis called attributive fraction) to see if preventive intervention succeeded in eliminating the adverse effect of the selected risk indicators on internalizing problems. The attributive fraction reflects the percentage by which the incidence rate of internalizing problems can be reduced when the adverse effect of a risk factor is eliminated by a preventive intervention. The authors found that if these early risk factors were effectively ameliorated through means of a preventive intervention, up to 57% of internalizing cases at age 11 could be avoided or decreased; however, some of the risk indicators might be influenced by genetic factors (i.e., maternal psychopathology) and, therefore, would make it more difficult to target intervention. Even though these risk factors are not measured in the current study it still has implications for the promotion of early identification of internalizing problems and intervention.

Such findings highlight the need to identify factors in and around the child that may influence the course and/or sequence of internalizing behaviour problems (e.g., Eggum et al.,

2011). Research has shown that children's relationships and social interactions with peers can influence the development of internalizing behaviours (e.g. Boivin et al., 1995), making it pertinent to develop a better understanding of the ways in which peer relationships and victimization contribute to the development and maintenance of internalizing problems in children. The effects of peer victimization on internalizing behaviours problems will be examined in order to further understanding on the nature and subsequent outcomes of negative peer relationships.

Peer victimization

When looking at a child's behavioural, or socio-emotional development one must look at the social environmental context in which the child resides, and what role it plays in the child's outcomes. There has been a growing interest in the potential contributions of peer relationships on child's socio-emotional and behavioural development (e.g. Boivin et al., 1995; Reijntjes et al., 2010), as peers constitute a social context that affects the child's functioning and adjustment (Gazelle & Ladd, 2003; Newcomb et al., 1993). In the past, peer victimization was viewed as an almost inevitable part of childhood, however attention to this phenomenon has increased as parents, schools, and health professionals have recognized the relationship that victimization has on a range of psychosocial adjustment problems (Hawker & Boulton, 2000). For example, negative peer relationships can lead to or exacerbate internalizing problem difficulties. Peer interaction characterized by consistent and severe victimization can greatly affect a child's behavioural and social functioning.

Definition of victimization. There is not a concisely agreed upon definition of peer victimization, which makes it hard to compare and contrast studies when one is particularly looking at outcomes of peer victimization. Olweus (1993) defines bullying or peer victimization as a student being exposed, over and over again, to negative actions on the part of one or more

other students. "An individual is being victimized if he or she is subjected to repeated and prolonged negative treatment by one or more persons" (Olweus, 1993, p. 9). Olweus (1996) places a strong emphasis on aggressive, negative behaviours being carried out frequently and over time, as well an imbalance of power or strength in this definition, which is said to characterize true bullying. It is not classified as bullying when teasing is done in a friendly and playful way, or when two students of about the same strength or power argue or fight (Olweus, 1996). Hawker and Boulton (2000) similarly define peer victimization as the experience of repeated harassment by peers. Others have more broadly defined victimization as a role or position that children occupy in aggressive encounters such as being the target of peers' aggressive behaviours, which helps distinguish it from the more specific bullying relationship definitions and acknowledges that even non-repeated attacks can be hurtful and harmful (e.g. Perry et al., 1988).

Prevalence and stability. Research has reported estimates of children who are severely or repeatedly victimized by their peers ranging from 10% up to 30% (e.g., Barker et al., 2008a; Hawker & Boulton, 2000) and many more are victimized less occasionally (Storch & Ledley, 2005). For example, most children will be victimized at some point within their school years, but only subsets are continuously victimized (Perry et al., 2001). Victimization has been shown to start at an early age, and tends to be common when children enter the school system (i.e. kindergarten) and form new peer groups (Kochendefer & Ladd, 1996). Most often, victimized children are at the bottom of the social ladder within the peer group to begin with by being rejected by peers, and often rejection leads to victimization (e.g. Hanish & Guerra, 2000; Hodges et al., 1997).

Most physical victimization decreases throughout elementary and middle school, and with age there appears to be a steady downward trend of victimization year-by-year throughout

the ages of 8 to 16 based on self-reports (e.g. Olweus, 1993; Smith, Masden, & Moody, 1999). Carney and Merrell (2001) noted in their meta-analysis of peer victimization studies and intervention programs that there may be a peak in bullying and victimization between the ages of 9 and 15, with younger children typically being victimized by older children (i.e., an 11 year old victimizing a 9 year old), and older children being selected as targets based on weakness or slower development as compared to same-age peers. Research with community-based samples estimated that up to 30% of children are stable victims of peer aggression with higher percentages more likely in early grades (e.g. Hawker & Boulton, 2000), such stable victimization may be due to the antagonists gaining some type of reward from victimizing that specific child (Smith, Shu, & Madsen, 2001). Research has further noted that those children who are chronically targeted experience this negativity throughout childhood and adolescence (e.g. Hodges & Perry, 1999; Scholte et al., 2007).

Further support for victimization beginning at an early age has been represented in the research, showing that in preschool, aggressive interactions happen frequently, and that young children are able to recognize that they themselves are victims (Kochendefer & Ladd, 1996). Barker and colleagues (2008a) found that peer victimization is identifiable in preschool, with victimization being reported by mothers of preschool children, which was further associated with teacher-reported victimization in first grade. Children's preschool victimization trajectories characterized as moderate/increasing or high/chronic victimization over the past 6 months were associated with elevated levels of peer victimization in first grade based on teacher reports. Not only were high/chronic and moderate/increasing patterns of peer victimization revealed through the mothers' ratings during preschool, but also these patterns of negative peer experiences persisted for some children throughout early primary school. Findings from this study support the idea that chronic and increasing victimization patterns begin at an early age when children begin to interact socially with peers within the school context. Furthermore, a large proportion

(71%) of the sampled children followed a low/increasing victimization trajectory, with a smaller proportion in the high/chronic (4%) trajectory, which must be noted when interpreting results as a very small portion of children were in the high/chronic trajectory. Very few children followed a high/chronic trajectory, which is comparable to other findings of early elementary populations (e.g., Kochenderfer-Ladd & Wardrop, 2001), but this 4% of children and even the low and moderate/increasing groups even is still significant, and of great importance when examining peer victimization as these children can potentially have negative social and behavioural developmental outcomes from such victimization, which can progress into long-term problems.

Overall, peer victimization is important to study due to the many potential implications (i.e., depression, sucidality, anxiety, withdrawal), either short or long term, and the fact that this phenomenon affects a number of students within the school context as the above research shows. Peer victimization has been reported to start at a young age, and even though it tends to decrease throughout middle childhood and adolescence, those who are victimized, even if they are not chronic victims, may experience adverse mental health consequences from peer victimization. The repercussions from such stressful, traumatic and persistent experiences can result in behavioural and emotional problems that persevere for years afterward.

Peer victimization and children's internalizing problems

Peer victimization in childhood has been reported as a precursor of both short and long-term problems, such as chronic worrying, nightmares, decreased well-being (Arseneault et al., 2010), overall adjustment problems in the elementary years (Boivin et al., 1995), depression (Hawker & Boulton, 2000) and persistent internalizing symptoms over time (Reijntjes et al., 2010; Zwierzynska et al., 2013). As such, children who are victimized are more likely to feel lonely and depressed, and show subsequent affective and behavioural problems relative to their peers (Boivin, et al., 1995; Hodges et al., 1999), emphasizing the importance of studying

environmental/contextual factors, such as peer relationships, in the etiology of internalizing

problems (Zwierzynska et al., 2013).

Internalizing problems have been found to be predictive of victimization, although

moderately weakly (r = .18 to .20) (e.g., Kaltiala-Heino et al., 2010; Sweeting et al., 2006;

Reijntjes et al., 2010), and peer victimization has been shown to predict internalizing problems

concurrently and over time (Arseneault et al., 2006; Gazelle & Ladd, 2003; Hanish & Guerra,

2002; Hodges & Perry, 1999; Reijntjes et al., 2010), and severity of such internalizing problems

(Zwierzynska et al., 2013). Fekkes et al.'s (2006) longitudinal study is one that elucidates the

bi-directional victimization-internalizing problem connection well. They investigated whether

victimization precedes psychosomatic and psychosocial symptoms or whether these symptoms

precede victimization for elementary school children aged 9 to 12 years. The authors reported

that victims of bullying had significantly higher chances of developing new psychosomatic and

psychosocial problems, while children with depressive symptoms and anxiety had a higher

chance of being victimized. Hodges and Perry's (1999) study reiterates the vicious cycle that

promotes stability of victim status in their 1 year longitudinal study of children in third through

fourth grade, in which they found that internalizing problems, physical weakness and peer

rejection all contributed to increased victimization. In addition, victimization predicted

increases in later internalizing problems and peer rejection. Although these studies illustrate the

bi-directional relationship between peer victimization and internalizing problems, which will

not be done in the present study, it still demonstrates the extent of the problem of peer

victimization and how it is predictive of internalizing problems. It further depicts how a vicious

cycle and maintenance of internalizing problems and peer victimization may happen if there is

no intervention strategy put into place. Furthermore, both of these studies were done on older

elementary students, therefore, there is a need for the investigation of younger primary school

populations, as we know little about how peer victimization affects children's behavioural

development at an early age.

Overall, victimization may form a vicious cycle, with the association between victimization and internalizing problems being a reciprocal one; internalizing difficulties both add to the risk of becoming a victim and increase as a result of victimization (Fekkes, Pijpers, Fredericks, Vogels, & Verloove-Vanhorick, 2006; Hodges, Boivin, Vitaro, & Bukowski, 1999; Hodges & Perry, 1999; Lester et al., 2012; Olweus, 1993). Several longitudinal studies indicate that peer victimization may play a causal role in the development of depressive symptoms in primary school children (Arseneault et al., 2008; Gazelle & Ladd, 2003; Hanish & Guerra, 2002). Furthermore, studies suggest that primary school children who have internalizing problems and/or depressive symptoms are at an increased risk of being victimized, as their behaviour may indicate a vulnerability, thus rewarding their attackers with a sense of power (Fekkes et al., 2006). These students may be less capable to defend themselves or ward off aggressors, or even afraid to report the incident to others (Hodges & Perry, 1999), which may make them an easy target. Many victimized children exhibit behaviors that may be summarized as "internalizing behaviours", in which, for example, they cry easily, are noticeably anxious, and are socially withdrawn (Hodges et al., 1997). Much research also recognizes that socially withdrawn children, or those with internalizing-like problems tend to also be characterized as "passive victims" (Perry et al., 1988), and these types of passive victims tend to have high levels of internalizing problems (Arseneault et al., 2006). Passive victims also represent the most common type of victim, and these children are usually described as anxious, insecure, and tending to withdraw and/or cry when attacked by others (Carney & Merrell, 2001), all of which are characteristic of children with internalizing difficulties. In addition, passive victims have also been described as being characteristically quiet, sensitive, cautious, lonely, physically weak, and they tend to have poor self-esteem, and no friends (Olweus, 1994). Such children may feel as if they have no one to turn to for help, which makes them withdrawal socially or

become anxious within the school ecology.

Hodges et al. (1997) looked at the extent that children's internalizing behaviour vulnerabilities were related to peer victimization and looked at whether or not having friends protected these vulnerable children. Their research suggested that behavioural vulnerabilities place a child at risk to be victimized only to the extent that the child is not "socially protected" from victimization by having supportive friends or by being liked generally by the peer group. If behaviourally vulnerable children have supportive friends or are better liked generally by peers, they tend to be protected from victimization and other negative experiences. This way of looking at the relationship between peer victimization and internalizing problems is common (e.g., Bukowski et al., 1995; Hodges et al., 1997; Hodges & Perry, 1999; Rubin, Coplan & Bowker, 2009), and gives insight into how peer groups and relationships function and how some children who have internalizing problems may not be victimized if they have at least one supportive friend. Consequently, this research suggests that other social relationship may serve a protective function for children who are victimized, such as the teacher-child relationship.

Summary and conclusions

Knowing how victimization affects children is of importance as studies show that peer victimization becomes increasingly stable over time, with the same children enduring such negative experiences throughout childhood and adolescence (e.g. Hodges & Perry, 1999; Olweus, 1978; Scholte et al., 2007). Likewise, internalizing problems may progressively increase over the years (Mesman et al., 2001), and both victimization and internalizing problems can progress into extreme forms of depression or suicidal ideation (Barker et al. 2008b; Liu et al., 2011; Zahn-Waxler et al., 2000), and/or long-lasting social isolation, loneliness, anxiety and poor social competence (Boivin et al., 1995; Kochenderfer-Ladd and Wardrop, 2001). For these reasons, further research needs to consider protective or buffering mechanisms that can help children who are experiencing victimization and internalizing

distress.

The recognition that victimization is an antecedent of negative developmental trajectories has led to the desire to understand how victimization affects internalizing problems, as well as the conditions that reduce the chances that a victimized child will develop such problems. For example, most research has focused on the peer microsystem, and the protective function that having even one friend can protect those who are victimized from internalizing problems (e.g., Hodges et al., 1997; Hodges & Perry, 1999). However, the peer network is not the only important social system operating in classrooms. The relationship between teacher and child is another system that is pertinent to the development of emotional and behavioural problems, and may be a contributing factor between victimization and the development of internalizing problems.

Teacher-child relationship

There is increased acknowledgement of teachers as adults whose relationships with children contribute to the child's overall development within and outside the school setting (Stuhlman & Pianta, 2001). It has been said "the teacher-child relationship holds promise as a developmental context that can provide nurturance and coherence for children as they navigate the social world of school" (Baker, 2006; pg. 227). The teacher-child relationship involves multiple dimensions and can be described as positive, with feelings of warmth, emotional support and closeness or rather negatively and characterized by conflict with varying degrees or levels of conflict or warmth (Hamre & Pianta, 2001; Pianta, Steinberg, & Rollins, 1995). Both conflict and closeness within the teacher-child relationship can contribute to a child's social, emotional and behavioural development (Baker, 2006; Birch & Ladd, 1998; Buyse, Verschueren, Verachtert, & Van Damme, 2009; Pianta et al., 1995; Pianta & Stuhlman, 2004). Closeness in the teacher-child relationship has been viewed as a having a supportive function in

the school environment (Birch & Ladd, 1998). Close relationships with teachers may act as an emotional support system or protective factor and have been shown to be associated with child behaviour orientations (i.e., increasing positive or decreasing negative behaviours) (e.g., Birch & Ladd, 1998; Howes et al., 2000; Ladd et al., 1999), making the teacher-child relationship a possible buffer against the development of maladaptive behaviours (Baker et al., 2008; O'Connor et al., 2011; Stuhlman & Pianta, 2001). On the other hand, conflict or a lack of warmth/coldness in the teacher-child relationship may be an exacerbating/risk factor or stressor for children, and may impair their adjustment to school (Birch & Ladd, 1998; Ladd et al., 1999). Such negativity within the teacher-child relationship has shown to be a significant predictor of problematic behavioural outcomes, even when controlling for early indicators of these behaviours (e.g., Birch & Ladd, 1997; Howes, Hamilton, & Matheson, 1994; Pianta & Nimetz, 1991; Pianta et al., 1995).

Overall, the relationship that children form with the teacher in the early years is associated with a range of outcomes that set a child up for competent or incompetent behaviour in relationships with peers and future teachers (Birch & Ladd, 1998; Howes & Hamilton, 1993; Howes et al., 1994; Stuhlman & Pianta, 2001). Quite possibly within these early primary years the teacher may be as important or even more important than the peer group as children may look to the teacher as the authority, and parent-like figure for support, guidance and learning of appropriate behaviour.

Closeness in the teacher-child relationship. Closeness refers to the degree of warmth, security and positive affect between the teacher and the child, as well as how comfortable the child is approaching the teacher. Closeness between teacher and child is characterized by warmth and open communication (Hamre & Pianta, 2001; Pianta & Steinberg, 1992). It also encompasses how comfortable children seem in approaching the teacher, talking about their feelings and experiences, and using the teacher as a support system (Buyse et al., 2009). Close

relationships with teachers that are high in warmth and closeness have been hypothesized to increase children's ability to engage in academic tasks (Hamre & Pianta, 2001), to help children behave competently with peers and future teachers (Birch & Ladd, 1998; Howes & Hamilton, 1993; Howes, Matheson, & Hamilton, 1994), and allows them to have better social skills (Pianta & Stuhlman, 2004). It is within a close relationship that the teacher may best be able to provide children with positive feedback, overall guidance and support, and help aid the development of their coping skills (Hamre & Pianta, 2001; Tropp-Gordon & Kuntz, 2013).

Conflict in the teacher-child relationship. Conflict refers to the degree of negativity, high levels of tension and hostility or lack of warmth between the teacher and child and appears to be the factor most strongly related to problematic child developmental outcomes when teachers' views of the relationship are assessed (Ladd & Burgess, 2001; Pianta & Steinberg, 1992). Teacher-child relationships that are high in conflict are often characterized by hostile and non-compliant interactions and disputes, and have been hypothesized to operate as stressors (e.g., causes of anger, more behavioural problems, less engagement, or anxiety) (Birch & Ladd, 1998; Ladd et al., 1999; Pianta & Stuhlman, 2004) that interfere with young children's adjustment. Teacher-child relationship conflict has been researched more extensively in regards to its association with children's externalizing behaviours (e.g., Hughes et al., 1999; Silver et al., 2005), and predictive of low prosocial and disruptive behaviours even a year later (e.g., Birch & Ladd, 1998). Futhermore, less commonly a conflictual teacher-child relationship has been associated with internalizing behaviour problems (e.g., Birch and Ladd, 1997; Pianta & Stuhlman, 2004).

One must note that teacher-child relationship quality is not exclusive, thus scoring high on one dimension will not prevent a child from scoring high on the other dimension. However, the Student-Teacher Relationship Scale developed by Pianta (1991) treats closeness and conflict

as mostly independent factors.

Teacher-child relationship influencing peer relationships

For a long time, researchers rarely took into consideration the role of teachers in children's peer relations even though teachers often interact with students, albeit not always consciously, in ways that contributes to classroom social dynamics and peer ecologies (Farmer et al., 2011). Drawing from Ecological theory, one can expect that interactions within and across the teacher-child and peer relationships should affect one another. A teacher's role within the classroom places them in a position in which their individual relationships with students are connected to students' relationships with one another, and they are likely able to offer support to students who are facing difficulties within their peer relationships (Cohen & McKay, 1984). Teachers may influence peer dynamics in a way that places children at risk of being victimized or protect children against peer victimization. Closeness or conflict within the teacher-child relationship can motivate peers to act in a certain fashion toward that child. Hughes et al. (2001) argued that in elementary classrooms the teacher serves as a social referent for children, such that classmates make inferences about children's attributes and likeability based partially on their observations of teacher-student interactions. It has also been hypothesized that teachers may have more direct influence on student aggression, school liking, and peer relations at the younger grade levels, by the way in which they relate to students, provide emotional support, and manage problem behaviors (Bierman, 2011). Therefore, there has been recognition by researchers in regards to the processes and influences between the teacher and peer systems.

Teacher-child relationships have been shown to influence children's competencies with peers in the classroom. Most interestingly, Howes et al. (1994) found that children's relationships with teachers were better predictors of competence with peers in preschool than was the mother-child relationship. Emotional security and socialization within the teacher-child

relationship predicted more competent, prosocial, gregarious and less maladaptive (i.e., hostile or withdrawn) social relationships with peers (Howes et al., 1994). Hughes and Kwok's (2006) study further illustrates the teacher's role in influencing peer relationships. They found that teacher-student relationship quality in first grade predicted children's peer acceptance - based on sociometric nominations - the following year. Furthermore, Hughes and Chen (2011) found a bi-directional effect between peer liking and the teacher-student relationship across three elementary school years, with both affecting each other over time. The authors found that peer liking over the course of grades 2 to 4 reciprocally affected teacher-student relationship quality; however, this study had limitations primarily due to the teacher being the only informant.

Past research also indicates that high teacher preference in kindergarten and first grade significantly predicted subsequent decreases in peer rejection 2 years later, after controlling for previous levels of peer rejection (Taylor, 1989). Students who experienced peer rejection by fellow peers were less likely to remain rejected in subsequent years when they experienced a positive relationship with their early years teacher. However, the researcher did not assess peers' perceptions of teacher preference, thus one cannot conclude that peers were aware of teacher preferences.

Further support for the teacher's influence on the peer ecology can be seen in the examination by Runions and Shaw (2013), in which they found that teacher-child relationship conflict in prekindergarten predicted the likelihood and severity of victimization in the same year and through grade one. Additionally, research has shown that teacher reports of their conflict and not their closeness with preschool children emerged as a significant predictor of peer victimization (teacher-reported), with the teacher-child relationship making a significant contribution after controlling for children's behavioural characteristics (i.e. aggression and social withdrawal) (Shin & Kim, 2008). The teacher-child relationship was also a stronger

predictor of peer victimization than parenting behaviours (i.e. neglect, warmth, coercion), which further emphasizes that relationships with teachers provide a context within the school ecology in which children do or do not gain peer liking or approval. However, the significant findings may be due to shared source variance in which the teacher rated on the relationship and peer victimization, and generalization of these results may not be possible as the sample population was Korean children, and therefore, results may be specific to their culture.

Troop-Gordon and Quenette (2010) examined teacher's responses to students' peer victimization and internalizing problems with students in fourth through sixth grade. They found that different responses to victimization by teachers (i.e., advocating assertion, avoidance or independent coping) had subsequently differential influence on the level of internalizing problems for boys and girls. When teachers used low levels of advocating assertion, avoidance or independent coping it protected (buffered) boys from internalizing problems, but when they advocated the use of these passive response strategies they had greater internalizing problems. For girls, peer victimization was significantly predictive of internalizing distress when perceptions of the teacher as advocating independent coping were low. This study explicitly looked at student's relational schemas, and highlighted that not only do peers look to the teacher for cues as to how to treat other students, but also victimized children themselves may hold expectations regarding their teacher's responses to these incidents, which can affect their adjustment outcomes. Troop-Gordon and Kuntz (2013) further looked at the extent that a warm or conflictual relationship had on the relationship between peer victimization and school adjustment for third and fourth grade children. They found that having a close, warm relationship with the teacher mitigated the relationship between peer victimization and school liking, such that at high levels of peer victimization there was less of a decline in school liking for those children who had a relationship with their teacher characterized by warmth and low conflict. The converse was found for those children with conflictual relationship with their

teachers, in which teacher-child conflict exacerbated the effects of peer victimization on academic performance, and steeper declines in school liking. This study included a younger age demographic, which shows that teachers are an important mitigating factor for those young children who are being victimized and school liking. Conflict within the teacher-child relationship likely comprises a child's feelings of having no support, which adds to the stress of being victimized, and closeness within the relationship presumably makes a child feel like they have support.

Flaspohler, Elfstrom, Vanderzee, Sink and Birchmeier (2009) explored the impact of bullying on child well-being (i.e., quality of life/life satisfaction) in a sample of elementary and middle school children by looking at social support obtained from peers and teachers. Flashpohler et al. (2009) controlled for gender and grade, and found that perceived social support from peers and teachers affected the impact of bullying on students quality of life and well-being. Students who perceived high peer social support and low teacher social support showed a significant association between victimization and quality of life than students who perceived having low support from both peers and teachers. However, students who perceived high teacher support but low peer support failed to show this effect. An even more significant finding was that students who perceived that they had both peer and teacher social support exhibited the strongest significant association between victimization and quality of life, which suggests that having peer social support in tandem with teacher support provides the strongest buffer against the negative effects of bullying. This study provides important evidence for the development of positive teacher-child relationships and teacher social support for students who are being bullied in order to lessen the negative effects associated with being victimized.

Overall, it appears that the teacher is an influential social agent through whom children learn to competently socialize with peers, as well as peers learning from the teacher how to

interact with each other. This reiterates the complexity of numerous variables that impact human development (i.e., teacher and peers), and how dynamic interactions between individuals and social contexts affect development (e.g., Bronfenbrenner, 1979). The research regarding the teacher-child relationship has grown and acknowledged the importance of positive interactions between students and teachers starting in the early school years. However, most of the research has overly relied on shared source variance, with the teacher reporting on the relationship and subsequent variables; therefore, the present study will try to avoid this problem with the use of multiple informants. With saying that, primarily, the teacher-child relationship has shown to be an important factor in a child's development within and outside the classroom, and has been shown to have implications for the development of positive relationships with peers, and for a child's internalizing problems.

Teacher-child relationship and internalizing problems

Although much research has focused on the parent-child relationship and its association with internalizing behaviours, research suggests that the school context, and more specifically the quality of teacher-child relationships, also shapes children's social and behavioural development (e.g., Pianta & Nimetz, 1991; Pianta & Stuhlman, 2004; Pianta et al., 1995; Pianta et al., 1997). The association between the teacher-child relationship and internalizing problems is bi-directional, with each influencing the other. Children with internalizing behaviours affect the teacher-child relationship, and on the other hand, the quality of the teacher-child relationship affects a child's internalizing behaviours. In the school environment, children experience much more fluctuation in factors that may affect the relationships they form, such as having more than one teacher, and changing teachers every year. These new social demands and situations can be quite challenging for children with internalizing behaviours, which can make children withdraw and/or avoid confrontations with people (e.g., Bayer et al., 2011; Burgess, Wojslawowisz, Rubin, Rose-Krasnor, & Booth-LaForce, 2006). This type of withdrawing or avoidant

behaviour that is characteristic of children with internalizing tendencies places them at risk for developing less positive relationships with their teachers (Birch & Ladd, 1998). Although externalizing behaviour problems have been studied more frequently and have been hypothesized to be more disruptive to the formation of teacher-child relationship quality (e.g. Doumen et al., 2008; Meehan, Hughes, & Cavell, 2003, Silver, Measelle, Armstrong, & Essex, 2005), there is research hypothesizing the impact of the teacher-child relationship on students' internalizing problems (e.g. Birch & Ladd, 1997; Pianta & Stuhlman, 2004).

It has been noted that children's emotional and behavioural problems influence the quality of the relationship these children form with teachers, thus relational closeness or conflict within the relationship is partially dependent on the child's classroom behaviour. Studies often focus on the one direction of internalizing problems affecting the teacher-child relationship. More specifically, in several studies, internalizing behaviour has been shown to jeopardize the quality of relationship formation with teachers (e.g., Birch & Ladd, 1997, 1998; Buyse et al., 2009; Henricsson & Rydell, 2004, 2006). Furthermore, O'Connor et al. (2011) noted that children with internalizing behaviour problems may be in need of emotional support to handle challenging environments in less avoidant, withdrawn manners. They found that children with early internalizing behaviours in first grade who developed high-quality teacher relationships evidenced lower levels of internalizing behaviours in fifth grade that was comparable to their peers with low levels of internalizing behaviours in early childhood. On the other hand, those children with poor teacher-child relationships that constantly had a decline in the quality of the relationship over time were at risk for higher levels of internalizing behaviour problems than peers with more positive teacher-child relationships in elementary school. The above noted studies provide evidence that the teacher-child relationship may be a valuable factor within the classroom that affects the development and maintenance of internalizing problems either negatively or positively.

Often research looks at child internalizing problems predicting the teacher-child relationship, yet the teacher and the teacher-child relationship quality (i.e., warmth, support or conflict) may be an important predictive factor of change in behaviour in the early elementary years, and has the ability to act as a protective factor against the development of internalizing problem behaviours. Several studies have shown that the quality of early teacher-child relationships influences or exacerbates the development of internalizing problems (e.g., Barker et al., 2008; Birch & Ladd, 1997, 1998; Buyse et al., 2008). High quality teacher-child relationships have been associated with low levels of internalizing problems, and contrastingly, low quality relationships have been associated with internalizing behaviour problems in early and middle childhood in cross-sectional research (e.g., Birch & Ladd, 1998; Henricsson & Rydell, 2004; Ladd & Burgess, 1999). Furthermore, the depiction of a positive teacher-child relationship having the potential to act as a protective factor for children with behavioural problems is in line with other research that has shown the protective factor of positive teacher-child relationships (e.g., Pianta & Stuhlman, 2004; O'Connor et al., 2011). Pianta and Stuhlman (2004) noted that internalizing problems in first grade was predicted by a lack of teacher support in preschool. Mother-rated child internalizing behavior at first grade was predicted by preschool and first grade teacher reports of closeness. Specifically, less closeness reported by the preschool or first grade teacher was linked to higher levels of mothers' reports of internalizing problems in their child. This study adds to research by focusing on early primary years and the association between conflict and closeness within the teacher-child relationship and children's subsequent social and behavioural adjustment.

The teacher-child relationship as a moderator. Due to their extensive contact with children, teacher-child relationships are worthy of attention, yet to date the moderating role of the teacher-child dyad in relation to internalizing has not been explored extensively. Research on moderating variables between peer victimization and internalizing problems has looked at

social support networks (i.e., parents, peers, teachers), which helps guide my hypotheses and provides relevance for investigating the moderating role of the teacher-child relationship, but none have looked at the quality of the teacher-child relationship. The teacher may be an important determinant and someone who can support a child who is dealing with being victimized by peers, and help in the amelioration of internalizing problems.

The study done by Arbeau, Coplan, and Weeks (2010) looked at the teacher-child relationship as a moderator between a child's shyness and overall social school adjustment. They found that among first grade children, shyness was overall related to lower social adjustment. However, a close teacher-child relationship appeared to buffer many of the negative outcomes. More specifically, shy children who formed closer relationships with their teachers had lower rates of school avoidance, anxiety, and social withdrawal. They further found that dependent teacher-child relationships appeared to exacerbate the negative outcomes of shy children, but they found no evidence that conflict within the teacher-child relationship moderated shy children's outcomes, which may be due to the authors only looking at the variable of shyness and not overall internalizing problems, as well as looking at shyness as a predictor. Even though this study did not look at peer victimization, it still provides insight into the moderating role of the teacher-child relationship on young children's adjustment, which helps in validating the importance of the present hypothesized study.

Furthermore, Baker et al. (2008) found that conflict within the teacher-child relationship can potentially exacerbate children's internalizing problems and their overall school adjustment for children from kindergarten to grade five. The authors found that students with high degrees of conflict with the teacher and internalizing problems ultimately had poorer school adaptation; thus, conflict moderated the relationship between internalizing problems and school adaptation. Children with internalizing behaviour problems and conflicted relationships with their teachers had poorer positive work habits than similar peers with more positive teacher relationships. In

addition, having internalizing problems and conflict in the teacher-child relationship was negatively associated with classroom adjustment. In this regard, children with early internalizing problem behaviours in the classroom may end up in a vicious or virtuous cycle, wherein their behaviour influences the quality of the teacher-child relationship, and the teacher-child relationship affects children's subsequent behavioural adjustment (e.g., Birch & Ladd, 1998; Baker et al., 2008; Hamre & Pianta, 2005).

Others studies have noted the role that social support plays in the relation between stressful life events, such as victimization, and internalizing problems (Jackson & Warren, 2000). Social support has been defined in many ways. Perceived social support has been defined as an "individual's perception of being cared for, loved, esteemed, and a member of a network of mutual obligations" (Cobb, 1976). It has also been defined as a global concept, consisting of feelings of esteem and care from a variety of sources or a network, and as a singular concept, such as an influential relationship with one significant person (Jackson & Warren, 2000). Support from others has been depicted as a way to help children regulate their emotions and thoughts in ways that may encourage more positive social exchanges with other persons (i.e., between the child and teacher or between peers) (Kochenderfer & Ladd, 1997; Pianta, 1999); therefore, testing the social support mechanism of the teacher-child relationship in relation to peer victimization and internalizing problems is warranted. Thus, the role of the teacher-child relationship on peer victimization experience outcomes in the earliest school years needs to be examined. To date, no studies have examined whether the teacher-child relationship moderates the risks of peer victimization on internalizing problems.

Davidson and Demaray (2007) examined the relationship between victimization and internalizing distress for middle school boys and girls (grades 6-8) being moderated by different levels of social support (i.e. parent, teacher, peers and school). In this study, social support was generally defined as "knowledge that a person is cared for, is esteemed, and belongs to a large

network of concerned people" (Pearson, 1986). They found gender differences for boys and girls victimization outcomes on the basis of who provided the support. Regression analyses revealed that female students with high parent support and high victimization scores had lower internalizing distress. Conversely, female students with low parent support and high victimization had higher internalizing distress. There were no other significant interactions for females, as teacher, classmate or school support had no buffering effect on females internalizing problems. Individual regression analyses for teacher, classmate and school support for male students appeared to all have significant effects and consequently buffer internalizing problems. Boys who had high teacher, classmate, and school support and high victimization scores tended to have lower internalizing distress from bullying, and the converse was found when there was low social support in regards to those predictors. The findings from this study provide important evidence for the moderating role of the teacher-child relationship and child gender on the relationship between peer victimization and internalizing problems in middle childhood, as this study showed that the beneficial effects of the teacher-child relationship quality might be different for boys and girls' outcomes. Further research needs to be done in early childhood to see if this holds true for younger populations, as there is no research to date that looks at the moderating role of the teacher-child relationship in relation to peer victimization and internalizing problems for younger children.

Given the promise of the quality of the teacher-child relationship as being a reliable, stable and predictive factor in the maintenance and/or development of internalizing problems (e.g. Arbeau et al., 2010; O'Connor et al., 2011), and in line with the buffering hypothesis of social support (e.g., Cohen & Wills, 1985; Jackson, 1992), it was felt that teachers would either be a buffering or enhancing (exacerbating) factor in children's level of internalizing problems in the context of peer victimization over the course of pre-kindergarten to grade one. Therefore, when teacher-child conflict is high the stronger the relationship between peer victimization and

internalizing problems becomes, which signifies an enhancing, exacerbating effect. Teacher-child conflict then acts as another risk factor and stressor in the relationship between peer victimization and internalizing problems due to the fact that conflict with the teacher possibly strengthens the signal to the child's peers that targeting the child is acceptable which increases or maintains their internalizing behaviour problems. On the other hand, when teacher-child warmth is high the relationship between peer victimization and internalizing problems becomes weaker or diminishes, such that teacher-child warmth buffers the negative effects of peer victimization on internalizing problems. When the teacher-child relationship is characterized by warmth, this relationship acts as a supportive, secure, and protective figure in their lives which allows for the child to feel like someone care for him/her or that they have someone to turn to when faced with adversity; therefore, results in the child not developing or having increased internalizing problems. Emerging from the research around teacher-child relationships is the impression that these early relationships are important for overall child development, relationships with peers and others, and subsequent child behaviour. Yet, not only does the quality of the teacher-child relationship affect a child's internalizing problems or peer relationships and victimization, but child characteristics also could play a role in how each of these variables relate to one another. Individual differences pertaining to boys and girls needs to be investigated as boys and girls could react differently to victimization experiences, and form qualitatively diverse relationships with teachers.

Gender differences for internalizing behaviours, peer victimization, and t-c relationship

Gender is a child characteristic that can affect how a child reacts to and perceives a stressful life event (i.e. peer victimization or conflict in the teacher-child relationship), which consequently could impact the child's level of internalizing problems. Of importance to educational and developmental research is the further examination of how young boys and girls are differentially or equally affected, and in what way child gender affects such relationships.

Internalizing problems. Internalizing behaviours appear to affect both girls and boys relatively equally at a young age. Some studies have reported that in early childhood there are no clear sex differences evident in depressive and anxiety disorders, and other characteristics of internalizing problems (e.g. Keenan & Shaw, 1997; Zahn-Waxler et al., 2000), but by adolescence, girls and not boys, show a marked increase in anxiety disorders, mood disorders and other internalizing-like symptoms (e.g. Nolen-Hoeksema & Girgus, 1994).

Olsen and Rosenblum (1998) found that mean scores of internalizing problem behaviours did not differ significantly for boys and girls at preschool or kindergarten measurement times, such that boys and girls were evenly represented among children who showed higher levels of internalizing problems in these years. However, teacher-rated scores on girls' internalizing problems were highly stable across times, whereas boys' internalizing symptoms were not found to be as stable, which suggests preschool age girls may have more persistent internalizing problems or boys' problems may vary more as a function of external factors, for example, the teacher-child or peer relationships.

Bongers and colleagues (2003) also found no differences between boys and girls' level of internalizing problems between the ages of 4 to 6, but between the ages of 7 to 18, girls showed a steady marked increase in internalizing problems in comparison to boys. Sterba, Prinstein and Cox's (2007) study provides evidence that quite possibly the contradictory findings of level of internalizing behaviour problems for boys and girls may be due to divergent trajectories as the authors' investigated the age on onset of gender differences in internalizing behaviour problems by means of looking at internalizing behaviour trajectories for a community sample of children between the ages of 2 to 11 years. They found that the rate of change in internalizing behaviour trajectories between genders was different, starting at the age of 2 more girls than boys followed an elevated-stable internalizing behaviour trajectory up until the age of

11, and more boys than girls followed a decreasing than increasing trajectory. The above noted studies somewhat contradict each other with some finding that gender differences in internalizing behaviours do not occur until the teen years (e.g., Bongers et al., 2003; Zahn-Waxler et al., 2000), and others finding it much earlier (Sterba et al., 2007), which may be due to the studies have overlapping age ranges, and including older age ranges (e.g., Bongers et al., 2003; Sterba et al., 2007).

Gender, t-c relationship, and subsequent behaviour problems. Research presents support for a relationship between child gender, the teacher-child relationship and subsequent child behaviour problems with boys and girls forming different relationships with their teachers in terms of level of conflict or closeness, which in turn affects the development of child behaviour problems. Koepke and Harkin's (2008) study examined gender differences in kindergarten to fourth grade students on the level of conflict and closeness in the teacher-child relationship as reported by teachers with the Student-Teacher Relationship Scale (Pianta, 1991). They found significant gender disparities in the level of conflict in the teacher-child relationship for boys at all ages, with more distance (i.e., lower closeness) and conflict between teachers and boy students. The authors, on average, found a trend of decreasing conflict between teachers and girl students, with high levels of conflict being reported in kindergarten through grade 1 ($M =$ 17.40), but decreasing between grades 2 through 4 ($M = 16.06$). Levels of conflict for boys remained constant throughout elementary school years, and measured at significantly higher levels than girls. Murray and Murray (2004) found that the gender of the participating children was associated with teacher-child relationship quality, with girls being rated as higher in closeness, and boys high in conflict. This suggests that gender is related to teacher perceptions of the teacher-child relationship, in which females are generally rated as higher in closeness than males.

As reviewed above, the teacher-child relationship quality has also been shown to affect children's adjustment to school, and the quality of the teacher-child relationship on adjustment has been shown to be different for boys and girls. Hamre and Pianta (2001) examined the longitudinal predictive validity of the teacher-child relationship on behavioural and school adjustment by examining child characteristics, such as gender, as a moderator for kindergarten through eighth grade children. Their findings suggest that girls who had a close relationship with their kindergarten teacher tended to have more positive work habits in early elementary years, as well as fewer disciplinary problems in later elementary years, than did boys. There was also a significant interaction between relational negativity (i.e., conflict) and gender in predicting the number of disciplinary infractions in upper elementary school, such that kindergarten teachers' ratings of the quality of the relationship was strongly associated with boys' disciplinary infractions in elementary school. Overall, the interesting finding from this study was that negativity within the teacher-child relationship continued to uniquely predict behavioural outcomes into upper elementary and middle school, specifically more so for boys. However, a limitation of this study was that they combined their behaviour problem composite, which means that they combined the internalizing and externalizing-like problems into one variable, which makes interpretation of results complicated, and makes efforts at replication and extension important.

Given the reported findings above, gender may possibly be a moderating variable as well, such that the teacher-child relationship may differentially affect boys and girls, which subsequently affects the level of the child's internalizing problems. No study to my knowledge has directly looked at these proposed factors of interest in this study. Baker (2006) looked concurrently at the associations between teacher-child relationship quality and positive school adjustment moderated by child characteristics, such as gender. The study was done with elementary year children (first to fifth grade) and found that girls experienced more closeness

and less conflict with their teachers than did boys. As well, this gender difference tended to have a more positive value for girls in which they then had better social skills and behavioural outcomes (i.e., less internalizing problems) when they had a positive teacher-child relationship than boys with similar relationships. On the other hand, boys tended to evidence more conflictual interactions with their teachers, and poorer overall school adjustment. Gender moderated the association between the teacher-child relationship and school outcomes. Girls were more advantaged relative to boys, as they tended to have better quality teacher-child relationships, which resulted in better reading and social skills, and lower internalizing and externalizing problems.

It is important to look at characteristics of the child and how they affect or influence the development of behavioural problems. Child gender, being a boy or girl, appears to affect the quality and level of conflict and closeness within the teacher-child relationship, which also affects the child's school adjustment. Research has shown that conflict seems to be very representative of boys' relationships with teachers, putting boys at a greater risk for developing behaviour problems.

Gender, internalizing problems and victimization. Overall, there are contradictory and inconclusive findings in the literature regarding the relationship between gender, victimization and subsequent internalizing distress. In a study by Slee (1995), peer victimization was positively correlated with depression and unhappiness at school among school-aged children (M_{age} = 10.3 years) regardless of gender. Craig (1998) found similar findings for children in grades 5 through 8, such that that the interaction between gender and victimization on internalizing-like problems (i.e., anxiety, depression) was non-significant.

There is a possibility that gender differences do arise in early ages, but most studies do not look at young primary age children in regards to victimization and subsequent problems,

even though emotional and behavioural problems that appear in early childhood tend to persist and be troublesome for years after. For this reason, there is a need for further investigation, as not much is known about the relation between child gender, peer victimization and internalizing problems in a young population.

Gender, internalizing, t-c relationship and victimization. The relationship between victimization, child gender, the teacher-child relationship and child internalizing problems is not well researched. Few studies recognize the teacher as a socially supportive figure and protective factor in regards to peer victimization and internalizing problems. Likewise, the role of gender is often not discussed when looking at the relationship between peer victimization, teacher-child relationship and internalizing problems.

In addition, gender could moderate the relationship between victimization and internalizing problems; with victimization and the different strategies boys and girls use to cope with victimization having differential effects on subsequent internalizing problems. No study has focused on children in the primary years, but research on older populations indicates that physical victimization equally affects boys and girls in the same way, with subsequent internalizing problems also being found (e.g., Craig, 1998; Slee, 1995; Storch et al., 2003). Furthermore, no study to my knowledge has looked at the joint moderating role of gender and quality of the teacher-child relationship on internalizing symptoms, but research on social support mechanisms indicates that teachers and child gender could have implications on the relationship between peer victimization and internalizing problems (e.g. Davidson & Demaray, 2007; Kochenderfer-Ladd & Skinner, 2002; Papafratzeskakou et al., 2011). Further research needs to be done in order to disentangle the links between peer victimization, the teacher-child relationship, child gender and internalizing problems, which is what the present study hopes to do.

When looking at gender, peer victimization, coping strategies (i.e., seeking support) and subsequent maladjustment (i.e., internalizing problems), Kochenderfer-Ladd and Skinner (2002) found that both boy's and girl's (at 9-10 years old) victimization was associated with similar psycho-emotional and social adjustment problems, but that the coping strategy of seeking support affected them differently. There were gender differences found for outcomes of seeking social support from others. Seeking support (i.e., asking for help from parent or friend, telling a friend or parent, asking a family member for advice) only had a favourable effect for victimized girls' risk for social problems, in which seeking support appeared to buffer victimized girls from social problems. On the other hand, seeking support had an unfavorable effect on victimized boys, as they tended to be lonelier, and have lower peer preference because the authors hypothesized that seeking support diminished their social status in the peer group. The seeking social support variable did not explicitly identify who they sought support from, making it hard to discern who they sought out for support (i.e., friend, parent or teacher). So further research is needed to elucidate whether the teacher is a fundamental person that students seek support from, if there are gender differences for who seeks out the teacher, and whether or not teacher support is associated with subsequent socio-emotional adjustment. Furthermore, the study by Kochenderfer-Ladd and Skinner (2002) supports the need to test the three-way interaction of peer victimization, teacher-child relationship quality and child gender in the prediction of child internalizing behaviours.

Papafratzeskakou and colleagues (2011) investigated the moderating role of parental and peer support and gender differences in the association between peer victimization and depressive symptoms. The found peer support appeared to moderate the effects of physical victimization on depressive symptoms such that when adolescents reported having high peer support in their lives, their emotional adjustment was not affected as much despite having been victimized. Regarding parental support, only main effects were found for both genders, such

that parental support protected against internalizing symptomatology for males and females. This study was done with adolescent participants, thus peer support at this age may be more beneficial for victimized persons. Compared to adolescents, younger children are more likely to spend the majority of their school day with the same teacher and tend to be more reliant on adults for aid and guidance (Lynch & Cicchetti, 1997), which is why more research needs to be done with primary school-aged children and the moderating, protective or amplifying effect, of other social support networks (i.e., teachers) between peer victimization and internalizing problems.

The above studies confirm the importance of looking at gender and the teacher-child relationship quality as moderating variables between the association of peer victimization and internalizing problems; however, there are still many unknown answers, and inconsistent and contradictory findings, which need to be clarified and further examined. The level of conflict or closeness in the teacher-child relationship can be dependent on the gender of the child (i.e., different for boys and girls), which subsequently affects the outcome of children's internalizing problem behaviours, and illustrates why further examination is needed to extricate when and under what conditions children are affected.

Moderating relationships of the teacher-child relationship and child gender

Since much of children's peer victimization occurs on school grounds, where teachers are primary influential figures, the teacher may be a socially supportive figure that can buffer the negative effects of peer victimization for children (Atlas & Pepler, 1998; Olweus, 1993). Research on bullying and victimization has highlighted the fact that social support from others can help to ameliorate the harmful effects or outcomes of peer victimization (e.g. Davidson & Demaray, 2007; Leff, 2007). Positive relationships with the teachers have shown to serve as a protective factor against maladaptive behaviour problems, and help place children on a

trajectory towards higher levels of school adjustment and competence (e.g. Arbeau et al., 2010; Hamre & Pianta, 2001; Birch and Ladd, 1998; Pianta et al., 1995). Additionally, child characteristics, such as child gender, could affect the formation of the teacher-child relationship, either positively or negatively, and consequently the level of internalizing problems (e.g. Baker, 2006; Hamre & Pianta, 2001). As noted above, research has looked at how gender affects the development of teacher-child relationships, victimization and internalizing problems; however, no research to my knowledge has looked directly at the teacher-child relationship acting as a moderator between peer victimization and internalizing problems, nor gender as a moderator between the quality of the teacher-child relationship and internalizing problems, as this present study seeks to.

Implications of previous research on present study. All the presented findings show that early emotional and behavioural problems have been found to precede child, adolescent, and adult depressive psychopathological problems, which makes it of great importance to identify children at risk for high and continuous internalizing problems early in development (Gilliom & Shaw, 2004). Internalizing problems are often overlooked or identified as less troublesome because they are not necessarily overt behavioural acts like externalizing behaviours; however, they are just as serious as, if not more, due to the intropunitive and internally distressing nature of the behaviour. On that note, understanding precursors to the development of internalizing behaviours, starting at a young age, is of importance. Within the school ecology, peer victimization has been shown to be one factor that is related to internalizing problems. Peer victimization is a grave and troublesome problem that can have detrimental effects for those who experience it, and given the implications of such events on child social and emotional functioning further research needs to look at internalizing problems as an outcome of peer victimization.

Children with socio-emotional and behaviour problems are most often more vulnerable within the classroom, but a strong teacher-child relationship can promote better adjustment (e.g., Anan & Barnett, 1999; Baker, 2006; Buyse et al., 2008). Children who have more positive teacher-child relationships tend to be able to adjust better to the classroom, and the teacher-child relationship has the potential to decrease or inhibit internalizing problems (e.g., Arbeau et al, 2010; Baker et al. 2008; O'Connor et al., 2011). As well, the teacher-child relationship has shown to help students construct positive peer relationships (Howes et al., 1994; Hughes & Kwok, 2006; Hughes et al., 2001). Previous research shows that emotional and social support can potentially protect children from internalizing problems (Anan & Barnett, 1999; Baker et al., 2008); therefore, teachers need to be supportive of children with internalizing problems, especially when they are not getting support from their peers. For this reason, moderator analyses in regards to the quality of the teacher-child relationship needs to be done to further our understanding of the effects of the potential protective or exacerbating factor of the teacher-child relationship.

Given the mounting evidence that supportive systems around the child may lessen or exacerbate internalizing problems for those children faced with stressful life events it seems imperative that the quality of the teacher-child relationship be examined further. Parent and peer support has been more prominent in the literature, which illustrates the gap and the need to explore the impact of teacher support on child internalizing behaviours (e.g., Farmer et al., 2011), as it has been implicated as important in similar regards (i.e., found to have an impact on boys; Davidson & Demaray, 2007). Since the study is evaluating the social school ecology, and with participants of young children who are just beginning their transition into the school system, it was believed that the teacher-child relationship was a pertinent mechanism to investigate and focus on.

Furthermore, given that research has presented a picture that boys and girls potentially form different relationships with peers and teachers, and react differently to adversity, looking at gender differences is important. Studies have indicated that child gender has an effect on the quality of the relationships formed with teachers, with boys forming more conflictual relationships, and girls forming closer, warmer relationships (e.g., Baker, 2006). Research with older children indicates that both genders are physically victimized by peers and that physical victimization has similar outcomes, with boys and girls alike developing internalizing problems (e.g., Slee, 1995; Storch et al., 2003), but studies have neglected to look at younger population outcomes and gender differences. Child gender has also been shown to moderate the relationship between the teacher-child relationship and school adjustment, with girls overall having better outcomes in comparison to boys (Baker, 2006).

The extant literature suggests that the study of peer victimization on internalizing problems is important, as well as looking at the moderating effect of the teacher-child relationship and child gender; however, further investigation is still needed to answer some pertinent questions (See figure 1 for Path Model). It appears important to look at the influence of teacher and peers on child development, which is in line with an Ecological theoretical model that looks at multiple people within multiple settings coming together to affect development. It also is important to study children in the early years, as this is when peer victimization begins, peer relationships are starting to be formed, and internalizing behaviour problems beginning, which have the potential to become stable if not detected or intervened with. As well it seems appropriate not only to focus on the problematic child, but also to investigate what classroom features (i.e. teacher-child relationships, peers) amplify or reduce the child's internalizing problem behaviour, with a need to examine whether the quality of the relationship between teacher and child moderates the impact of peer victimization on children's internalizing problems. There is also a need to examine child gender to see how characteristics of the child

also impact the influence of peer victimization and teacher-child relationship on internalizing problems.

Figure 1.

Path model of moderating relationships
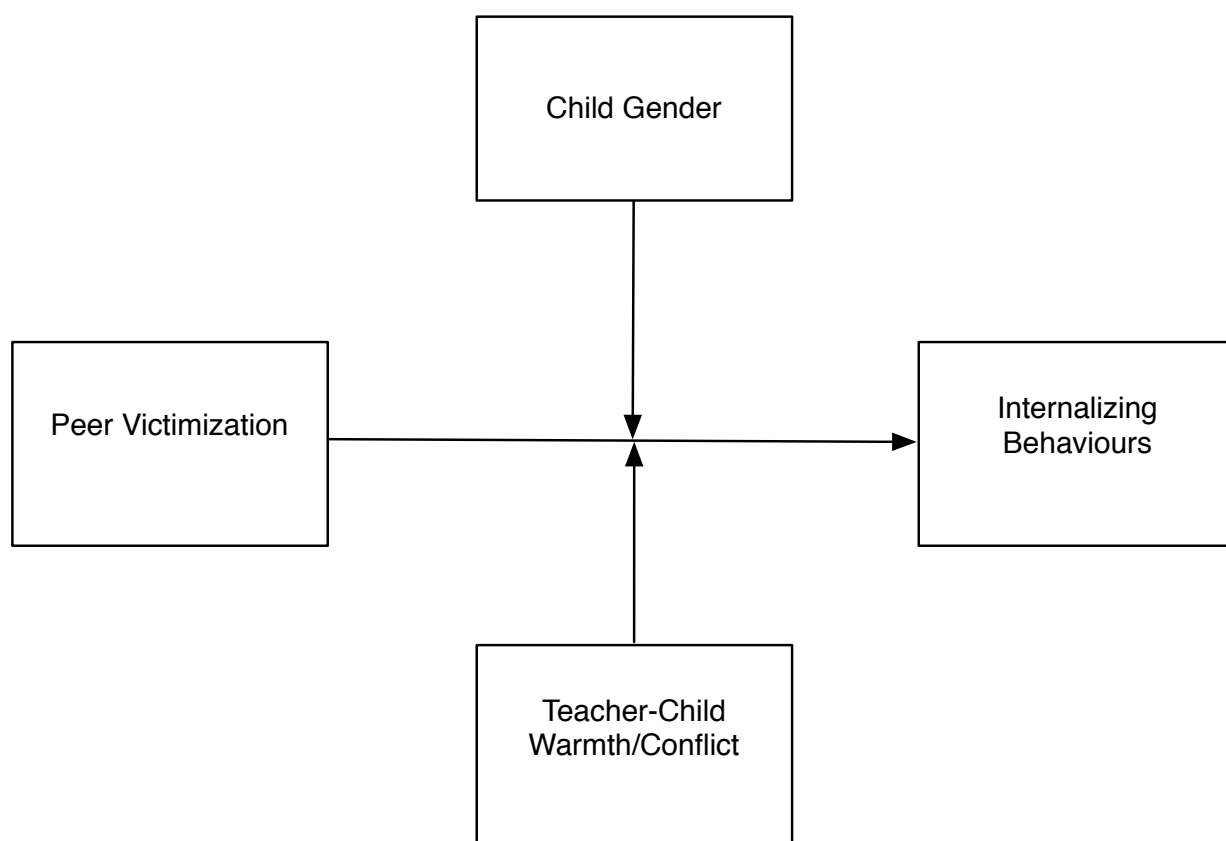
Figure 1. Schematic of the Predictive Relationship of Peer Victimization on Internalizing Problem with Teacher-Child Relationship and Child Gender as Moderators.

Research questions and hypotheses

      The purpose of this longitudinal correlational study is to examine the predictive role of peer victimization on internalizing problems behaviours, and by analyzing the moderating role

of the quality of the teacher-child relationship, as teachers appear to be a key developmental context within the school ecology. There will be further examination of child gender as a moderating role between internalizing behaviours and the teacher-child relationship, with residuals from grade to grade in internalizing problems being examined. Specifically, this study will be guided by Bronfenbrenner's (1979, 1986) Ecological Theory of Development to inform the hypotheses and research questions. As such, posed are the following research questions:

(a) Does peer victimization predict internalizing problems? Based on prior research, it is predicted that there would be a significant relationship between peer victimization and internalizing problems, yet further replication of this relationship needs to be done for children in the early primary years (e.g., Reijntes et al., 2010).

(b) Is the teacher-child relationship associated with internalizing problems? Prior research had led me to predict that the teacher-child relationship is associated with internalizing problems concurrently and over the years, but more replication of such findings need to done to confirm this relationship (e.g., Barker et al., 2008; Birch & Ladd, 1997, 1998; Buyse et al., 2008; Henricsson & Rydell, 2004; Ladd & Burgess, 1999).

(c) Does the teacher-child relationship moderate the influence of peer victimization on internalizing problems? Studies that have looked at social support networks (i.e., teachers, peers and parents) moderating the effect of peer victimization on internalizing problems led me to hypothesize that students who are victimized and have a positive teacher-child relationship high in closeness, would display fewer internalizing problems (i.e., buffering process) (e.g., Davidson & Demaray, 2007; Jackson & Warren, 2000). Alternatively, it is hypothesized that victims of bullying who have negative teacher-child relationships high in conflict, would display more internalizing problems (i.e., exacerbating process) (e.g., Davidson & Demaray, 2007).

(d) Does child gender moderate the influence of the quality of the teacher-child relationship on internalizing problems? Research has stated that at a young age there are not significant gender differences in internalizing problems, however, there appears to be gender differences in regards to teacher-child conflict or closeness on internalizing problems (e.g., Baker, 2006; Hamre & Pianta, 2001; Saft & Pianta, 2001). Studies by Baker (2006) and Hamre and Pianta (2001) lead me to believe that more girls than boys will have relationships characterized by closeness, in which they will have lesser internalizing problems. On the other hand, boys will have more relationships characterized by conflict, which will further be related to higher internalizing problems. Consequently, it was hypothesized that girls would be more likely to experience greater internalizing problems when they have conflictual teacher-child relationships than boys just because conflictual teacher-child relationships for girls are less common.

(e) Does child gender moderate the influence of peer victimization on internalizing problems? Research leads me to predict that child gender would not moderate the relationship between peer victimization and internalizing problems, as physical victimization has shown to equally affect boys and girls and subsequent internalizing problems are comparable (e.g., Craig, 1998; Slee, 1995; Storch et al., 2003). However, given that all studies have been done on older children, further examination needs to be done on early primary year children to examine this question.

To investigate these research questions and test their corresponding hypotheses, the current study followed longitudinally a sample of pre-kindergarten children through grade one.

Chapter 3

Methods

Participants

The participants were drawn from a previous study named the Childhood Aggression Prevention Project (CAP) for secondary analyses (Hall, Shaw, Cordin, Runions & Cross, 2009). In the original study, children were recruited from primary schools in a large Australian city by means of a stratified sampling approach in which an equal number of schools were randomly selected from three socioeconomic strata (low, mid, high), based upon the 2001 Socio-Economic Indices for Areas (SEIFA) Index of Disadvantage (Australian Bureau of Statistics, 2008). Thirty-six schools were originally contacted to participate in the study, and 24 (8 schools per SES strata) accepted. The schools were randomly assigned to study conditions, with 12 schools in the control condition and 12 schools in the intervention condition.

Children in the present study attended twelve of the schools, which comprised the control condition from the CAP intervention study, with four schools from each stratum (i.e. low, mid, high = 12 schools). Participants were recruited and assessed longitudinally from pre-kindergarten to grade one. At the start of the study, participating children were approximately 4 years old (pre-kindergarten) and followed through kindergarten (about 5 years old) until they were about 6 years old (grade one), which resulted in three data collection times.

Formal information letters and consent forms were presented to the teachers in order to consent to participation in the study. Parental consent was also requested from parents to participate in the study, with three waves of consent letters being sent out. Parental consent was sought at the start of the CAP study, with 10 parents consenting for their child to participate but they did not complete the parent reports; therefore, only teacher-rated reports were available. The first letter seeking active parent consent entailed mailing parents a letter describing the

study, requesting their active consent for their pre-kindergarten child to participate, as well as providing a contact telephone number for parents to call should they have any questions. Approximately three weeks after receipt of the first consent letter, parents who had not responded were sent a follow up information letter and consent form (this time handed to parents of pre-kindergarten students by the teacher at student collection time) again requesting active consent for their child to participate in the study. Two and a half weeks after this second letter was distributed, parents who had not responded were sent a final follow-up letter (posted to home addresses via schools) requesting passive consent for their child to participate in the study with reply paid envelopes included in each consent letter distribution. If parents did not respond indicating they did not wish their children to be a part of the study, passive consent procedures were assumed, and data were collected from teachers pertaining to the child. Parent and teacher consent letters can be seen in Appendix A.

Criteria for inclusion. Children included in the study were those who were in the non-intervention group, as the CAP study utilized intervention procedures and strategies to help build student-teacher relationships and decrease aggressive behaviour; thus, potentially positively affecting the sample of participants in the intervention group which could skew the results. Excluded were those missing data due to measurement instruments not being filled out (i.e., missing teacher-child quality questionnaire) and the missing data was handled by listwise deletion. In listwise deletion a case is dropped from an analysis because it has a missing value in at least one of the specified variables, making it so that analysis is only run on cases that have a complete set of data (Gerber & Finn, 2005). There were 13 missing parent reports for pre-kindergarten internalizing behaviours, with only 2 missing for kindergarten and grade one reports. Thirteen children were missing parent reported victimization in pre-kindergarten, with only 3 missing in kindergarten and none missing in grade one. There were no missing teacher reports for victimization in pre-kindergarten, 6 missing in kindergarten and none missing in

grade one. For the most part, all teacher reports on the teacher-child relationship in regards to conflict and closeness were completed except for one in grade one. This resulted in the inclusion of 259 children in pre-kindergarten, 272 children in kindergarten (139 girl and 133 boy) and 271 children in grade one.

Sociodemographics of raters. Demographically looking at the raters of the instruments, at time 1 (pre-kindergarten), all teachers were female, ranging in age from 25 to 60 years of age, 71% had a bachelor's degree or higher, and all teachers had a minimum of six years experience. Note that each year a different teacher was rating the specific aspects pertaining to the child. Ratings that the parents provided came predominantly from the mother of the child (90.4%), with most raters having some post-secondary education (66.1%). Twenty-percent had completed high school only, 13. 8% had an incomplete high school education, with two parents reporting no formal education, and the majority of families speaking mainly English at home (95.7%).

Instruments

This study used multi-source assessments throughout the three years of the previous CAP study. Multiple informants (i.e., teachers and parents) were used to provide data pertaining to the children as it is generally recommended that data be collected from more than one informant (Hunsley & Mash, 2007) in order to avoid problems stemming from shared source variance (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Shared source variance, also termed common method bias, is a common problem in behavioural and development research and a main source of measurement error (Podsakoff et al., 2003). Measurement error threatens the validity of the conclusions about the relationships found between the examined measures, yielding potentially misleading results (Nunnally, 1978). It was also felt that using information from teachers and parents, who ultimately have different relationships with the target child and

see them in differing settings, would help to obtain a more comprehensive, reliable, and valid picture of the child (e.g. De Los Reyes, 2011; Dirks, De Los Reyes, Briggs-Gowan, Cella & Wakschlag, 2012; Grietens et al., 2004). Using different informants thus allows for an opportunity to capture and ascertain how children behave or adapt in various settings from the perspective of that particular informant (Dirks et al, 2012), and to distinguish that some behaviours may be situation specific (i.e., in school); therefore, making note of which setting these behaviours occur in then is of importance (e.g., Achenbach et al., 1987).

One instrument measured the student-teacher relationship (STRS; Pianta, 2001), and was completed only by the teacher (See Appendix B). The other measures included the Social Behaviour Questionnaire (SBQ; Tremblay, Loeber, Gagnon, Charlebois, Larivee, & LeBlanc, 1991), in which teachers and parents provided ratings of their perceptions of the target child's peer victimization experiences, and parents rated children's internalizing behaviour problems (See Appendix C). Only parent reports were used for child internalizing behaviour assessments as teachers may have difficulties accurately identifying children's internal states, and that they tend to be more attentive to acting-out behaviours (see Sole, Bloom, Heath & Karagiannakis, 2008). Furthermore, each year a different teacher reported on the quality of the student-teacher relationship and peer victimization experiences, as each year children change teachers.

Student-Teacher Relationship Scale. The Student-Teacher Relationship Scale (STRS; Pianta, 2001) is a widely used measure for teachers' perception of relationships with specific students from preschool to grade 3 (ages 4–8), respectively. For more than a decade, the STRS "has been used in virtually every published study of teacher-child quality" (Lapp-Payne, 2003, p. 11). Pianta and Nimetz (1989, 1991) developed the STRS based on attachment theory, the attachment Q-set (Waters & Dean, 1985), as well as from a review of the literature on teacher-child interactions. The items involve the respondent's feelings about his or her relationship with the student, and about the child's behaviour toward the teacher. The full version of the STRS

(Pianta, 2001) consists of 28 items rated on a 5-point Likert scale and contains three subscales that measure conflict, closeness, and dependency. The present study used the STRS-short form (STRS-SF), which consists only of the conflict and closeness subscales.

The conflict subscale assesses the degree to which a teacher feels that his or her relationship with a particular student is characterized by negativity. The conflict scale consists of 7 items (e.g., "This child easily becomes angry with me", "This child and I always seem to be struggling with each other"). The closeness subscale measures the extent to which a teacher feels that his or her relationship with a student is characterized by warmth, affection, and open communication. The closeness subscale is made up of 8 items (e.g., "I share an affectionate, warm relationship with this child).

The STRS has excellent test-retest reliability (closeness = .88; conflict = .92; Pianta, 2001); high internal consistency with Cronbach's alpha ranging from .86 to .88 for closeness; conflict ranging from .90 to .93 (e.g., Hamre & Pianta, 2001; Koomen, Verschueren, van Schooten, Jak, & Pianta, 2012; Pianta, 2001); and well-established predictive and concurrent validity (Hamre & Pianta, 2001; Howes et al., 2000; Koomen et al., 2012; Pianta, 2001). The STRS has satisfactory internal consistency on both the Negative Interaction/Conflict scale, ($\alpha =$ .90 to .93) and the Warmth/Support scale ($\alpha =$ .86 to .88, respectively)(e.g., Doumen et al., 2012; Koomen et al., 2012; Pianta, 2001; Pianta et al., 1995). Inter-rater reliability and validity has been supported in research with early primary years samples with teacher and parent raters (e.g., Pianta & Stuhlman, 2004; Pianta et al., 2005). Pearson correlations from studies have reported a moderately negative correlation between the conflict and closeness subscales (-.40 to -.45, respectively) (e.g., Koomen et al., 2012).

As noted, this study used the STRS-SF. Given the frequent administration of the STRS scale, Pianta and his colleagues proposed a more flexible and less time demanding shortened version of the STRS. The STRS-SF is a 15-item self-reported measure with items rated on a 5-

point Likert scale from 1 (definitely does not apply) to 5 (definitely does apply) (Pianta, 2001).

The STRS-SF only contains two dimensions of the teacher-child relationship, the conflict and

closeness subscales, and omits the dependency subscale (Pianta, 2001). The STRS-SF shows

excellent psychometric properties. The Warmth/Closeness scale has an internal consistency of

.85, with the Cronbach's alpha for the Conflict scale being .89. The test-retest data indicate

good test-retest reliability for these scales even when accounting for teacher-level variance

(Closeness = .75; Conflict = .85), and the two scales are significantly negatively correlated with

one another ($r = -.30$, $p < .001$) (Hall, Shaw, Cordin, Runions, & Cross, 2007). Tsigilis and

Gregoriadis (2008) found a moderate negative association between the conflict and closeness

subscales ($r = -.38$), with Pianta and Stuhlman (2004) finding a lesser negative association

between Closeness and Conflict ($r = -.27$). Tsigilis and Gregoriadis (2008) found the STRS-SF

to have adequate internal consistency with Cronbach's alpha coefficient for Closeness being α =

.72 and Conflict being α = .82. Furthermore, Tsigilis and Gregoriadis (2008) examined the

factorial invariance across genders for the STRS-SF, and they found that conflict and closeness

are equivalent across boys and girls. This means that a teacher perceives the quality of his or her

relationships with students in the same way regardless of their gender.

The STRS has been widely used by many researchers to investigate connections

between aspects of teacher-reported teacher-child relationship quality and numerous concurrent

and future indicators of child development within the school ecology. Such studies have found

that the relationship quality a child forms with his/her teacher early on (i.e., kindergarten) is a

contributing and predictive factor for the formation of future relationships with teachers (Howes

et al., 2000; Jerome et al., 2008), the level of behavioural problems that children portray and

peer relationships (Birch & Ladd, 1998), the risk of retention (Pianta et al., 1995), and school

adjustment, academic skills and success over the years, and disciplinary violations (e.g., Birch

& Ladd, 1997; Hamre & Pianta, 2001; Howes et al., 1994; Pianta et al., 1995). Overall, the

STRS and STRS-SF have been tested and found to be valid and reliable measurement instruments of teacher-student relationships from the perspective of the teacher.

Social Behaviour Questionnaire. Tremblay and colleagues (1991) designed the questionnaire in order to evaluate and identify social behaviours and maladjustment. The SBQ reflects the caregiver's sense of the frequency of the child's specific behaviours (i.e., anxiety, victimization). The SBQ is comprised of items from the Preschool Behaviour Questionnaire (Behar & Springfield, 1974) and items from the Prosocial Behaviour Questionnaire (Weir & Duveen, 1981). The SBQ contains numerous subscales consisting of victimization, physical aggression/disruptive behaviour, internalizing behaviours, prosocial behaviour, and inattention. The alpha reliability coefficients for each of the subscales within the SBQ (i.e.,) has shown overall moderate to high internal consistency ranging from 0.61 to 0.93 (Gagnon et al., 1995; Tremblay et al., 1991), with reports from mothers showing more stability and consistency in ratings in comparison to teacher reports (Gagnon et al., 1995). Peer victimization and internalizing behaviour scales were both measured using the SBQ. The questionnaire is a good fit for the study of this nature as both teacher and parents are able to act as raters, and as it is well established as a measurement instrument for use with a school-age populations as young as preschool through 14 years of age (e.g. Moss et al., 2006; Tremblay et al., 1991).

In each year of the study, teachers and parents completed the SBQ (Tremblay et al., 1991) to assess peer victimization with three items from the questionnaire addressing experiences of victimization and assessing physical and verbal victimization experiences within the previous month (e.g., "was made fun of by other children", "was hit or pushed by other children"). Research has shown that parent and teacher reports of peer victimization show moderate agreement as to which children are being victimized, with statistically significant, but medium-sized (Cohen, 1988) correlations being found ($r = .27$) (e.g., Bonnet, Goosens &

Schuengel, 2011). Each question for the SBQ was rated on a three-point scale (1 = never; 2 = sometimes; 3 = often). Overall, the scale shows acceptable internal consistency, with Cronbach's Alpha being .73 for parents and .68 for teachers (Hall, Shaw, Cordin, Runions, & Cross, 2007). Test-retest reliability has been found to be acceptable for this scale (.70), and there is fairly adequate year-to-year consistency over the early primary years, pre-kindergarten to grade one, respectively ($r = .48$, $r = .40$, $r = .48$) (Runions & Shaw, 2013).

Internalizing problem behaviours were assessed by the SBQ as well, although only parent reports will be used for the present study. The internalizing scale of the SBQ consists of three subscales measuring anxiety (e.g., "Clung to adults or was too dependent"), emotional problems (e.g., Had trouble enjoying him/herself"), and social withdrawal (e.g., "Showed little interest in activities involving other children"), with 23 questions in all assessing internalizing problems for this study. Each parent rated the target child on a three-point scale (1 = never; 2 = sometimes; 3 = often) in regard to the question (e.g., "seemed to be unhappy or sad", "showed little interest in activities involving other children"). The SBQ internalizing measures appear to have adequate internal reliability within early childhood (i.e., between ages 3 and 8) ($\alpha = .63$ to $\alpha = .84$) (e.g., Loesel & Stemmler, 2012; van Lier, Barker, Tremblay, Vitaro, Brendgen, & Boivin, 2012). Hall, Shaw, Cordin, Runions and Cross (2009) found good overall internal consistency of the internalizing subscale with Cronbach's alpha of .77 for parents and .88 for teacher reports. Pederson et al. (2007) found adequate internal consistency across raters (i.e., teacher and parents) and over one year (age 6-7) that ranged from .60 to .73. The SBQ appears to have good inter-rater reliability between teacher and parent ratings for the internalizing subscale, but with varying agreement based on gender, with higher agreement for boys than girls. Mother and teacher ratings for boys internalizing behaviours were closer in agreement over a three-year span ($r = .47$ to .57) than for girls ($r = .23$ to .58) (e.g. Vitaro et al., 1991). Vitaro et al. (1991) have also reported that mother reports also appear to be more stable and

show good rater consistency over a three-year span in comparison to teacher reports; boys'

Pearson correlation from kindergarten to grade 1 was $r = .57$, $r = .56$ from kindergarten to grade

2, and grade 1 to grade 2 being $r = .64$ ($M = .59$). Likewise, girls' correlations over the years

was $r = .58$ from kindergarten to grade 1, $r = .49$ from kindergarten to grade 2, and grade 1 to

grade 2 being $r = .63$ ($M = .56$), respectively. Test-retest reliability of the internalizing problems

subscales has shown to be reasonably adequate at about $r = .66$ to $.62$ for children 7 and 8 years

of age within a two-month time period (Tremblay et al., 1991) and $r = .74$ to $.76$ within a two-

week period for children between the ages of 4 to 6 years (Hall et al., 2009).

Chapter 4

Design and Procedures

Procedure

Ethical approval. Ethical approval for the current study was obtained based on an ethical waiver from full ethical review of research involving human participants, in light of the current study restricting itself to the secondary analyses of the anonymized data collected as part of a previous study (Hall et al., 2009). The study was not expected to pose any significant risks to the participants due to the nature of the data being anonymous, and coded such that no identification could be made nor linked to the individuals who provided it.

The Human Research Ethics Committee from Edith Cowan University in Australia provided ethical approval for the initial study. Prior to the commencement of any assessments, principals, teachers and parents received information on the study procedures, and written consent was obtained to partake in recruitment of participants and to conduct the study. The surveys provided to teachers and parents were de-identified using child ID codes, with the only link to ID codes and names of participants being stored on a password-protected electronic folder, and the study was not expected to pose any significant risks to participants.

Data collection procedures. Data were collected from teachers and parents of the participating children at three time points over the three years of the study (2006-2008). Baseline data were collected from teachers and a parent of the participating child starting in November of 2006 (Term 4). The first follow-up (post-test 1) data were collected for kindergarten children in October 2007 (Term 3-4), and final data collection (post-test 2) took place in August 2008 (Term 2) when children were in grade one (Note: that the Australian school year runs from February to December).

Paper-based, self-administered questionnaires were mailed or delivered to schools. Questionnaires entailed all materials that they needed to answer in regards to the study (i.e.

demographics, SBQ, STRS). Questionnaires were placed in an envelope with the teacher/student name on a removable label. Each student and teacher was assigned a confidential identification number, which was recorded on their questionnaire; therefore no names were recorded on questionnaires. Teachers were asked to distribute the envelopes containing parent questionnaires. Parents were asked to return completed questionnaires to the school. Parents were asked to complete the survey, and to return them to teachers in the sealed envelope provided by the due date, and then teacher and parent questionnaires were collected from the schools by the CAP research team. Those parents who had not responded on time were sent a second copy through the school to deliver to the parents again. Table 2 shows the data collection procedures.

Table 1.

Procedures for Data Collection

Procedure	Description
Order of Administration	Questionnaire materials sent through school. Received by teacher and parent to self-administer. STRS, SBQ, and demographic information collected in November 2006, with new pre-kindergarten students baseline data collection in February 2007. Follow-up data was done with the STRS and SBQ, with post-test 1 collected in October 2007, and final data collection (post-test 2) in August 2008.
Time to complete measures	Each assessment was estimated to take on average 15 minutes per student for the teacher, and likewise for the parent.

Research Design

The study used a longitudinal panel design with correlational and regression analyses to investigate a) if peer victimization predicts internalizing problems, b) if the teacher-child relationship predicts internalizing problems, c) whether the teacher-child relationship moderates

the relationship between peer victimization and internalizing problems, d) if child gender moderators the relationship of peer victimization and internalizing problems, and finally e) if child gender moderates the relationship of the quality of the teacher-child relationship and internalizing problems. Hierarchical multiple regression analyses were used to investigate the research questions with internalizing problems as the criterion variable, and controlling for prior years internalizing scores, with peer victimization, the teacher-child relationship variables (i.e. conflict and closeness) and gender were the predictor variables. To test moderation hypotheses, the interaction between peer victimization and the teacher-child relationship, the interaction between teacher-child relationship and gender, the interaction between gender and victimization, and finally the interaction between gender, peer victimization and the teacher-child relationship were also tested and incorporated into the regression models.

At each time point (pre-kindergarten, kindergarten, first grade), teacher-child conflict and warmth, parent and teacher reports of victimization, and parent reports of child internalizing problems were examined. Multiple informants were used in order to avoid problems stemming from shared source variance (Podsakoff et al., 2003), with teachers reporting on the quality of the teacher-child relationship, both parents and teachers reporting on peer victimization and parents reporting on the level of internalizing behaviour problems. Reporters, predictor and criterion variables and all interactions are summarized in Table 2.

Since the aim of this study is to investigate the degree of association between variables, a correlational design was most appropriate, with correlations between the variables being analyzed in order to see how closely related they are, and whether there are positive or negative relationships between variables. Furthermore, moderator analysis using hierarchical multiple regression enabled the examination of two or more predictor variables, and the direction and magnitude of the associations between individual predictor variables and the criterion variable, as well as the interaction between predictors and criterion (Nolan & Heinzen, 2009). The R-

square, R-square change and the unstandardized beta values and standard errors will be looked at for each step of the regression analyses. The moderating effect is typically expressed as an interaction between predictor and moderator variable, in which an interaction term is made by multiplying the predictor by the moderator (Baron & Kenny, 1986; Holmbeck, 1997). For example, the interpretation of a moderator in multiple regression analysis is that the effect of the predictor variable on the outcome variable depends on, or is conditional on, the level of moderator variable. When a significant interaction term is found, the obtained regression lines for high, medium, and low values of the moderator variable are then plotted to determine whether there is a buffering (protective), enhancing (exacerbating), or situation-specific effect (Cohen & Cohen, 1983; Holmbeck, 1997). Hierarchical multiple regression also allows testing of associations among continuous (i.e., peer victimization, teacher-child relationship), and categorical variables (i.e., gender) (Segrin, 2010). Furthermore, it permits the testing of three-way interaction terms, although very large samples are often needed to detect these higher interactions in non-experimental designs (Judd, McClellan & Culhan, 1995).

Table 2.

Variables for Moderator Analysis using Hierarchical Regression

Regression Variable	Description	Rater
Predictor	Peer Victimization	Teacher/Parent
Predictor	Teacher-Child Relationship	Teacher
Predictor	Peer Victimization X T-C Relationship	
Predictor	Gender X T-C Relationship	
Predictor	Gender X Victimization	
Predictor	Gender X T-C Relationship X Victimization	
Criterion	Internalizing Problems	Parent

Chapter 5

Results

Overview of analysis

This section reviews the statistical analyses conducted to examine the research questions in this study. First, results of preliminary analyses to examine the composition of the sample and assess the suitability of the data for hierarchical regression are addressed. Second, results of hierarchical regression analyses are described in relation to the four research questions: (a) does peer victimization predict internalizing problems? (b) does the teacher-child relationship influences internalizing problems? (c) does the teacher-child relationship moderate the influence of peer victimization on internalizing problems? Finally, analyses will address whether (d) child gender moderates the influence of the quality of the teacher-child relationship or of peer victimization on internalizing problems? and (e) whether the teacher-child relationship and child gender jointly influence peer victimization on internalizing problems?

Preliminary analyses

Data screening and testing assumptions. Prior to analysis, data were screened and general trends in the data were examined to assess the assumptions of a regression analysis. Preliminary independent t-tests were performed to see whether students with English as a second language, those who needed additional English instruction or had special needs to see if there were group level differences of these variables on teacher-child relationship quality, peer victimization and internalizing variables. Preliminary descriptive analysis showed that 10 children were classified as having special needs (1.6%), 90 children were classified as not using English as a first language (14.6%), and 49 children needed additional English instruction (7.9%). Furthermore, independent t-tests indicated no significant group-level differences for these variables. For children needing additional English instruction there was not a significant difference on teacher-child warmth (t (604) = -.45, p = .09), and teacher-child conflict (t (604) =

.31, *p* = .06), as well as for peer victimization and internalizing problems (*p*s > .05). Children with special needs did not have significant differences on the variables either, with *t* (606) = .35, *p* = .06 on teacher-child conflict, and non-significant differences for internalizing behaviours (*t* (474) = .49, *p* = .06), and all *p*s were greater than .05 for all other variables; however, approached significance. For those children who spoke English as a second language there was not a significant difference for prekindergarten internalizing behaviours (*t* (471) = -.50, *p* = .62), nor was there a significant difference for teacher-child warmth (*t* (603) = .21, *p* = .06).

After looking preliminarily at these variables it was decided to deliberately select out ESL students, special needs and those children who needed additional English instruction. Furthermore, any other cases in the study that had data points greater than 27.88 as a cut-off were filtered out using Mahalanobis distance filter which was suggested by Tabachnick and Fidell (2001) using the Chi-Square critical values table (i.e., d.f. = 9, α = .001, two-tailed = < 27.88). Missing cases in the data were further taken care of by listwise deletion. Complete data for the present study was limited to 258 for pre-kindergarten children and 272 for kindergarten and grade one children.

Graphical representations and descriptive statistics were used to evaluate whether data met the assumptions of normality, linearity, homoscedasticity, and multicollinearity for regression analysis. Normality was assessed by examining skewness and kurtosis, and multicollinearity was assessed by Pearson product correlations among the predictor variables, with none of them significantly correlating with each other; thus, the assumption of multicollinearity did not appear to be violated. The scatterplot of regression residuals did not suggest any major violations of homoscedasticity, normality or linearity. Scatterplots and histograms are provided to show a graphical representation of the assumptions of normality, linerarity, multicollinearity and homoscedasticity (see Appendix D-F).

Regression analyses have been purported as adequately 'robust' to violations of assumptions except in the presence of measurement and specification error, but "that problems of heteroscedasticity and non-normality do not generally cause serious distortions", as regression analyses will typically provide estimates that are reasonably unbiased and efficient even when these assumptions are not met (Bohrnstedt & Carter, 1971, pg. 142). After testing the assumptions, all variables met the assumptions fairly well, with some skewness and kurtosis even after eliminating outliers affecting the normal distribution (see Appendix D for graphics). Some skewness and/or kurtosis may be expected with variables reflecting behaviour-problem and peer victimization due to the fact that many or most children will be rated as showing no or almost no problem behaviour or as not being victimized. Tabachnick and Fidell (1989) note that, with large enough samples, a variable with significant skewness or kurtosis often does not deviate enough from normality to make a realistic significant difference in the analysis. In other words, with large sample sizes the significance levels of skewness and kurtosis are not as important as their actual dimensions (i.e., progressing farther from zero) and the visual distribution because the standard errors contain the sample size number. A large enough sample size for Tabachnick and Fidell (1989) when using hierarchical multiple regression would be 20 times more cases than IV's (i.e., the present study would be 20 x 9 = 180). Therefore, with large enough sample sizes the null hypothesis is likely to be rejected when there are minor deviations from normality (Tabachnick & Fidell, 1989). In the present study there were no substantial concerns associated with skew or kurtosis for internalizing problems (skew range from .76 to 1.0; kurtosis from .25 to 1.7), parent-rated peer victimization (skew range from .92 to 1.35; kurtosis from -.42 to 1.26), and teacher-rated peer victimization (skew range from .75 to .1.10; kurtosis from 1.48 to 3.84) (i.e., none had positive skewness values that exceeded 2 or positive kurtosis values that exceeded 7) (Tabachnick & Fidell, 2007). Parent reports of internalizing problems and parent and teacher-reported peer victimization, therefore, very closely resembled

a normal distribution.

Descriptive statistics. Means and standard deviations of all measures were calculated to examine the general level and spread of data, and the composition of the sample. Results indicated that mean score on pre-kindergarten, kindergarten and grade one internalizing problems were, on average, stable, with pre-kindergarten being 1.38 ($SD = .22$, $n = 259$), kindergarten 1.36 ($SD = .19$, $n = 272$) and grade one 1.37 ($SD = .22$, $n = 272$). This provides insight into the average of the groups internalizing problem behaviours at a young age, as well as the relatively low number of children in this sample having such problems. It also shows the consistency of the parent ratings of the child's internalizing problems, as the means were comparable across years.

Mean parent and teacher reports of peer victimization were also comparable across years, with parent reports of victimization being slightly higher than the teacher reports with the highest in grade one at 3.96 ($SD = 2.1$, $n = 272$). The difference in rater's reports could possibly be due to variations in judgments, observations or behaviours concerning the child across situations (i.e., home vs. school) (e.g., Achenbach et al., 1987; Vitaro et al., 1991).

Mean teacher reports of warmth in the teacher-child relationship were higher than conflict scores with both staying roughly stable across teachers over the three years. Means of teacher-child relationship warmth stayed around 4.39 ($SD = .52$), and at its highest in pre-kindergarten at 4.42 ($SD = .59$). Teacher-child conflict ranged from a mean of 1.36 ($SD = .66$, $n = 272$) in pre-kindergarten, to 1.29 ($SD = .61$, $n = 272$) in kindergarten, and to 1.36 ($SD = .63$, $n = 272$) in grade one, indicating that different teachers over the years rated having more warm relationships with students than conflictual relationships. Means, standard deviations and ranges are reported in Table 3.

Table 3.

Descriptive statistics for all variables by wave of data collection year

Variable	Mean	SD	Range
INT Pre-Kindergarten (pre-K)	1.38	.22	1.00 – 2.30
Victimized pre-K teacher	3.19	.54	3.00 – 7.00
Victimized pre-K parent	3.74	1.0	3.00 – 6.00
STRS pre-K warmth	4.42	.59	2.50 – 5.00
STRS pre-K conflict	1.36	.66	1.00 – 4.71
INT Kindergarten (K)	1.36	.20	1.04 – 2.03
Victimized K teacher	3.32	.70	3.00 – 6.00
Victimized K parent	3.84	1.0	3.00 – 6.00
STRS K warmth	4.39	.51	2.63 – 5.00
STRS K conflict	1.29	.58	1.00 – 4.43
INT Grade 1 (G1)	1.37	.22	1.00 – 2.11
Victimized G1 teacher	3.28	.68	3.00 – 7.00
Victimized G1 parent	3.96	1.2	3.00 – 6.99
STRS G1 warmth	4.39	.52	2.50 – 5.00
STRS G1 conflict	1.36	.63	1.00 – 4.43

Note: sample sizes varied from pre-kindergarten data n = 258 to grade one data collection n = 272.

Furthermore, descriptive statistics for boys and girls were also calculated for all variables in order to see the means, standard deviations and range of scores for each gender (see Table 4). In relation to warmth in the teacher-child relationship, girls means were higher than boys throughout the years, with warmth at it's highest in prekindergarten (M = 4.51, SD = .54). On the other hand, teacher-child conflict was higher for boys throughout prekindergarten (M = 1.49, SD = .79) and kindergarten (M = 1.42, SD = .75) in comparison to girls, but in grade one their means were fairly similar (girls M = 1.34, SD = .65; boys M = 1.38, SD = .61). Girls reported higher means for parent-reported victimization in grade one (M = 4.08, SD = 1.2), but boys had higher means in prekindergarten (M = 3.75, SD = 1.1) and kindergarten (M = 3.93, SD = 1.0). Boys also had higher means for teacher-reported victimization in prekindergarten (M = 3.27, SD = .63), kindergarten (M = 3.37, SD = .71) and grade one (M = 3.40, SD = .76) in

comparison to the girls. Internalizing problems for boys and girls in prekindergarten were

comparable (girls M = 1.38, SD = .22; boys M = 1.38, SD = .22), but in kindergarten (M = 1.38,

SD = .19) and grade one (M = 1.40, SD = .23) girl's evidenced higher mean internalizing

problems.

Table 4.

Descriptive statistics for boys and girls

	Girls			Boys		
Variable	M	SD	Range	M	SD	Range
INT Pre-Kindergarten	1.38	.22	1.00 – 2.30	1.38	.22	1.00 – 2.17
Victimized pre-K teacher	3.13	.48	3.00 – 6.00	3.27	.63	3.00 – 6.00
Victimized pre-K parent	3.72	.96	3.00 – 7.00	3.75	1.1	3.00 – 6.00
STRS pre-K warmth	4.51	.54	2.50 – 5.00	4.32	.62	2.50 – 5.00
STRS pre-K conflict	1.25	.47	1.00 – 2.86	1.49	.79	1.00 – 4.71
INT Kindergarten	1.38	.19	1.04 – 2.03	1.33	.21	1.04 – 1.91
Victimized K teacher	3.27	.69	3.00 – 6.00	3.37	.71	3.00 – 6.00
Victimized K parent	3.72	1.0	3.00 – 6.00	3.93	1.0	3.00 – 6.00
STRS K warmth	4.47	.46	3.13 – 5.00	4.32	.62	2.63 – 5.00
STRS K conflict	1.17	.40	1.00 – 3.43	1.42	.75	1.00 – 4.43
INT Grade 1	1.40	.23	1.00 – 2.11	1.34	.21	1.00 – 2.08
Victimized G1 teacher	3.17	.57	3.00 – 6.00	3.40	.76	3.00 – 7.00
Victimized G1 parent	4.08	1.2	3.00 – 6.99	3.87	1.1	3.00 – 6.99
STRS G1 warmth	4.44	.53	2.50 – 5.00	4.32	.50	2.63 – 5.00
STRS G1 conflict	1.34	.65	1.00 – 4.14	1.38	.61	1.00 – 4.43

Note: Sample sizes for girls from prekindergarten to grade one ranged from n = 131 to n = 139. Boys sample sizes from prekindergarten to grade one ranged from n = 128 to n = 133, respectively.

Correlation analyses. Pearson product-moment correlations indicated a positive

correlation between internalizing problems over the course of the three years from pre-

kindergarten to grade one (r = .54 to .66, $p < .01$), showing stability in the relative rank order of

children to one another over the course of the three years (i.e., a child having higher scores in

pre-kindergarten in comparison to another child most likely also has higher scores in grade

one). As well, there were significant positive relationships concurrently and longitudinally between internalizing problems and parent reports of peer victimization each year, except from pre-kindergarten to kindergarten ($r = .12$, *ns*). The highest correlation between internalizing behaviours and parent-rated peer victimization across years was between kindergarten and grade one (kindergarten; $r = .22$, $p < .01$), with the highest concurrent correlation in grade one ($r = .35$, $p < .01$). There were no significant relationships found between teacher reports of peer victimization and parent-rated internalizing problems concurrently or longitudinally. Parent reports of victimization were also more stable and significant over the years from pre-kindergarten to kindergarten with a positive significant correlation $r = .44$ ($p < .01$), and from kindergarten to grade one $r = .40$ ($p < .01$). There were significant positive relationships found for teacher ratings of conflict in the relationship and teacher's ratings of victimization over the years, with the exception of teacher reports of victimization in kindergarten to grade one ratings of conflict within the teacher-child relationship ($r = .07$, *ns*). There were also significant positive relationships between teacher-reported peer victimization and conflict ratings concurrently in pre-kindergarten ($r = .27$, $p < .01$) and in kindergarten ($r = .28$, $p < .01$), with a slight increase in the strength of the correlation in grade one ($r = .35$, $p < .01$), showing that those children who were perceived as victimized by the teacher were also rated as having more conflictual relationships with them. Parent ratings of victimization and teacher ratings of conflict with the child produced a significant positive relationship across years and concurrently, except in pre-kindergarten ($r = .11$, n.s.) and from prekindergarten to kindergarten ($r = .12$, n.s.). Teacher-child warmth had a significant negative relationship concurrently with parent ($r = -.17$, $p < .01$) and teacher ratings ($r = -.22$, $p < .01$) of peer victimization, and internalizing problems ($r = -.19$, $p < .01$) only in grade one. Intercorrelations between measurement times of all variables are reported in Appendix G.

Tests of gender differences. Preliminary independent t-tests for gender were conducted to compare internalizing behaviours in pre-kindergarten, kindergarten and grade one for boys and girls. Results indicated that there was not a significant difference between boys ($M = 1.37$, $SD = .22$) and girls ($M = 1.37$, $SD = .22$) levels of internalizing problems in prekindergarten (t (257) = -.02, $p > .05$, n.s.) or boys ($M = 1.24$, $SD = .21$) and girls ($M = 1.38$, $SD = .19$) in kindergarten (t (270) = -1.79, $p > .05$, n.s.), but there was a significant difference in grade one scores for boys ($M = 1.34$, $SD = .21$) and girls ($M = 1.40$, $SD = .23$); t (270) = -2.27, $p < .05$.

Furthermore, significant gender differences on the quality of the teacher-child relationship were noted for conflict in pre-kindergarten, with a higher mean difference for boys ($M = 1.45$, $SD = .71$) in comparison to girls ($M = 1.24$, $SD = .47$) (t (270) = 3.10, $p < .01$), and for boys ($M = 1.42$, $SD = .75$) than girls ($M = 1.17$, $SD = .40$) in kindergarten (t (270) = 3.47, $p < .01$), but there was not a significant difference in grade one ($p = .63$; boys $M = 1.38$, $SD = .60$; girls $M = 1.34$, $SD = .65$). There was also a significant difference for teacher-child warmth in prekindergarten (t (270) = 2.87, $p < .01$) for girls ($M = 4.50$, $SD = .54$) and boys ($M = 4.31$, $SD = .62$). As well, teacher-child warmth was also significant in kindergarten (t (270) = 2.72, $p < .01$) for boys ($M = 4.30$, $SD = .55$) and girls ($M = 4.47$, $SD = .46$), and it approached significance in grade one (boys $M = 4.32$, $SD = .50$; girls $M = 4.44$, $SD = .53$; $p = .06$). Results further indicated that boys and girls did not differ significantly on parent reports of victimization throughout the three years, but boys ($M = 3.27$, $SD = .63$) and girls ($M = 3.12$, $SD = .48$) did differ significantly on teacher reports of victimization in prekindergarten (t (270) = 2.1, $p < .05$) and grade one (t (270) = 2.77, $p < .01$; boys $M = 3.39$, $SD = .76$; girls $M = 3.17$, $SD = 57$).

Regression analyses. Hierarchical multiple regression was used to test hypothesized main effects of predictors and moderating relationships between the hypothesized moderating variables of teacher-child relationship quality and child gender in regards to internalizing

problem behaviours a year later, while controlling for the previous year's internalizing problem behaviours. Mean-centered variables were used for testing main effects as well as interaction effects. For each regression equation, I controlled for prior years internalizing behaviours by entering it in the first step; therefore, kindergarten internalizing behaviours were regressed onto prekindergarten predictor variables in the hierarchical multiple regression, and then grade one internalizing behaviours were regressed onto kindergarten predictor variables. Predictor variables included peer victimization, sex of the child (1= boy, 0 = girl), conflict and closeness of the teacher-child relationship, and all two-way and three-way interactions. Testing moderation in a regression framework requires multiplying mean-centered predictor and moderator variables, and testing this cross-product as a unique predictor in hierarchical multiple regression analysis. All continuous predictor variables were mean centered prior to the creation of interaction terms and inclusion in the regression model to reduce potential problems resulting from multicollinearity, with the exception of the dichotomous variable of sex of the child (Aiken & West, 1991; Baron & Kenny, 1986).

The same procedures were used for all regression analyses. Predictor variables were entered hierarchically in order to investigate (a) whether parent-rated peer victimization and the closeness or conflict within the teacher-child relationship predicted changes in parent-rated internalizing problems, (b) whether the teacher-child relationship moderated the relationship between peer victimization and internalizing problems, (c) whether child gender moderated the relationship between the teacher-child relationship and internalizing problems, and (d) whether child gender moderated the relationship between peer victimization and internalizing behaviours. Finally, (e) the three-way interaction of peer victimization on internalizing problems as being moderated by both the teacher-child relationship and gender was analyzed. Individual regressions were ran for teacher-rated peer victimization and parent-reported victimization; therefore, they were not run in the same model.

Prediction of kindergarten internalizing behaviours

Regression analysis of kindergarten internalizing behaviours on pre-kindergarten teacher and parent-rated peer victimization, teacher-child warmth and conflict, and the interactions of teacher-child relationship quality and peer victimization resulted in non-significant findings, as all were greater than $p > .05$. The only significant main effect was kindergarten internalizing behaviours on prekindergarten internalizing behaviours (unstandardized $\beta = .58$, $SE = .04$, $p < .001$).

Prediction of grade one internalizing behaviours

Prior to the final hierarchical multiple regression, regressions were ran with just teacher-rated victimization and the interactions with teacher-rated victimization and teacher-child warmth. Teacher-child warmth still was coming out non-significant in the model (unstandardized $\beta = -.006$, $SE = .02$, $p = .78$), as well as the two-way interactions between teacher-rated victimization and teacher-child warmth (unstandardized $\beta = -.001$, $SE = .06$, $p = .99$), and gender and teacher-child warmth (unstandardized $\beta = .05$, $SE = .04$, $p = .24$), and the interaction between gender and teacher-rated victimization (unstandardized $\beta = -.01$, $SE = .04$, $p = 76$). Furthermore, the three-way interaction of gender x teacher-rated victimization x teacher-child warmth was non-significant (unstandardized $\beta = .03$, $SE = .07$, $p = .69$). Due to teacher-child warmth and teacher-rated victimization coming out non-significant, it was felt that the final regression would be ran with only parent-rated victimization and the interactions with teacher-child conflict only.

Predictors were entered into the final hierarchical multiple regression as follows: First, levels of internalizing problems in the prior year were entered, resulting in an R^2 change of .43 and was significant (unstandardized $\beta = .73$, $SE = .05$). Then, in step 2, gender was added into the model, resulting in an R^2 change of .01 (unstandardized $\beta = -.03$, $SE = .02$, *n.s.*). In step 3, teacher-child warmth (unstandardized $\beta = -.01$, $SE = .02$) and conflict (unstandardized $\beta = .06$,

SE = .02) were added into the model, resulting in an R^2 change of .03 (*p* < .001). Step 4 resulted in an R^2 change of .001 (unstandardized β = .02, *SE* = .03, *n.s.*) when parent-rated peer victimization was added into the model with the other predictors. In step 5, the addition of the victimization x conflict (unstandardized β = .002, *SE* = .05), gender x conflict (unstandardized β = -.10, *SE* = .04), and gender x victimization (unstandardized β = .03, *SE* = .06) interactions resulted in an R^2 change of .01 (*p* > .05). Finally, in step 6, the three-way interaction of gender x victimization x teacher-child conflict (unstandardized β = -.17, *SE* = .13) was added and resulted in an R^2 change of .003 (*p* > .05).

Main effects of predictors for grade one internalizing problems were examined. A significant main effect was found for gender (*p* < .05) and teacher-child conflict (*p* < .001) in kindergarten to internalizing behaviours in grade one (R^2 = .47), whereas no main effect was found for grade one internalizing behaviours for parent-rated peer victimization (*p* = .56), and teacher-child warmth (*p* = .76).

Finally, to test for moderated effects, an interaction term was computed by multiplying the predictor variables to form a new variable. The only significant interaction was teacher-child relationship conflict and gender in the prediction of internalizing problems in grade one (standardized β = -.23, *p* < .05). Thus, gender did moderate the link between teacher-child conflict and internalizing problems. Step 5 of the model with the addition of the teacher-child conflict X gender and the other two-way interactions with all the other predictors accounted for 47.7% of the variability in internalizing problems in grade one (R^2 = .477, R^2_{adj} = .46, SEE = .16, *n.s.*). The interaction between gender and parent-reported peer victimization was non-significant (standardized β = .002, *p* = .98), as was the interaction between peer victimization and teacher-child conflict (standardized β = .03, *p* = .67). Therefore, teacher-child relationship quality was not found to moderate the influence of peer victimization on internalizing problems,

nor was gender found to moderate the relationship between peer victimization and internalizing behaviours. Results of the final regression analysis are shown in Table 5.

Three-way interactions. The three-way interaction of gender x victimization x teacher-child conflict (unstandardized β = .17, n.s.) was non-significant; therefore, gender and teacher-child relationship quality together did not moderate the relationship on grade one internalizing behaviours.

Subsidiary Analysis

Supplementary analyses looking at partial and semipartial correlations were thought to be important to look at for each predictor of grade one internalizing behaviours as these correlations convey important information when multiple predictors are used. Partial correlations allow one to look at the individual weighting of predictor variables in the model since partial correlations treat the other predictors as covariates. The semipartial correlations further provide the correlations for each predictor once the regression model is finalized, and squaring these values informs us of the percentage of variance each predictor uniquely explains.

When looking at parent-rated victimization, the partial correlation was .04, and when the semipartial correlation was squared (.026*.026 = .0007) it accounted for approximately .1% of the model when all the other variables are partialled out. Teacher-child conflict on the other hand had a partial correlation of .20, and uniquely accounted for about 2% of the variance in grade one internalizing behaviours (semipartial correlation = .151*.151 = .02); whereas, teacher-child warmth had a partial correlation of -.02, and accounted for .02% of the variance in the model (-.013*-.013 = .0002).

Overall, it appears that when you look at partial and semipartial correlations that partial out the other predictor variables, that kindergarten teacher-child conflict is still the most pertinent predictor of grade one internalizing behaviours, and accounted for 2% of the variance in internalizing problems in grade one.

Table 5.

Summary of final regression analyses predicting first grade Internalizing problems

Criterion	Predictor	R^2	ΔR^2	β (SE)
Grade One	Step 1	.43	.43***	
Internalizing	Kindergarten internalizing			.72***(.05)
	Step 2	.44	.004	
	Kindergarten internalizing			.71***(.05)
	Gender			-.03*(.02)
	Step 3	.47	.03***	
	Kindergarten internalizing			.72***(.05)
	Gender			-.05*(.02)
	T-C Warmth			-.01(.02)
	T-C Conflict			.06***(.02)
	Step 4	.47	.001	
	Kindergarten Internalizing			.71***(.05)
	Gender			-.05*(.02)
	Peer Victimization			.01(.03)
	T-C Warmth			-.01(.02)
	T-C Conflict			.06***(.02)
	Step 5	.48	.01	
	Kindergarten Internalizing			.71***(.05)
	Gender			-.06**(.02)
	Peer Victimization			.01(.05)
	T-C Warmth			-.004(.02)
	T-C Conflict			.13***(.04)
	Gender x T-C Conflict			-.09*(.04)
	Gender x Victimization			.03(.06)

Victimization x Conflict			.002(.05)
Step 6	.48	.003	
Kindergarten Internalizing			.71***(.05)
Gender			-.05*(.02)
Peer Victimization			.04(.05)
T-C Conflict			.13***(.04)
T-C Warmth			-.01(.02)
Gender x T-C Conflict			-.08*(.04)
Gender x Victimization			.01(.06)
Victimization x Conflict			.14(.12)
Gender x Victimization x T-C Conflict			-.17(.13)

Note. $p < .05^*$, $p < .01^{**}$, $p < .001^{***}$. All predictors were from Kindergarten measurement times, while the criterion was from Grade 1. Peer victimization scores were from parents. Unstandardized Betas and standard errors are reported.

Probing of significant interaction effects

In order to interpret the significant interaction, regression lines for teacher-child conflict by gender were plotted using procedures recommended by Aiken and West (1991) and Dawson (2013) with a binary moderator. The plot of the interaction effect is provided in Figure 1. The plot indicated that the relationship between conflict within the teacher-child relationship and internalizing problems differed depending on the child's gender. Visually it appears that girls who have high conflict with their teacher tend to have higher levels of internalizing problems a year later compared to those with less conflict, and for boys it appears to be less significant. Further, post-hoc probing of the interaction was done in order to examine whether either of the slopes were significantly different from zero. Tabachnick and Fidell (1989) suggest doing post-hoc probing of a dichotomous variable, such as gender, by splitting the gender file to further inspect where the significance lies within the interaction. Post-hoc probing showed that teacher-child conflict as a predictor accounted for a greater proportion of the variance in girls'

internalizing problems, in which teacher-child conflict accounted for 5% of the variance in girls' grade one internalizing problems ($\Delta R^2 = .05$, $\Delta F = .00$). Teacher-child conflict only contributed to 2% of the variance in boys' grade one internalizing problems ($\Delta R^2 = .02$, $\Delta F = .03$). The standardized beta and unstandardized beta coefficients showed that kindergarten levels of teacher-child conflict was a stronger predictor of internalizing problems a year later for girls as there was a steeper slope for the relationship between teacher-child conflict and girls' internalizing problems which indicates a stronger association (standardized $\beta = .23$, unstandardized $b = 13$, SE $= .04$, $p < .001$) in comparison to boys (standardized $\beta = .14$, unstandardized $b = .04$, SE $= .02$, $p < .05$). However, both boys and girls who had high conflict in the teacher-child relationship tended to have significantly higher internalizing problems a year later compared to those with low conflict.

Figure 2.
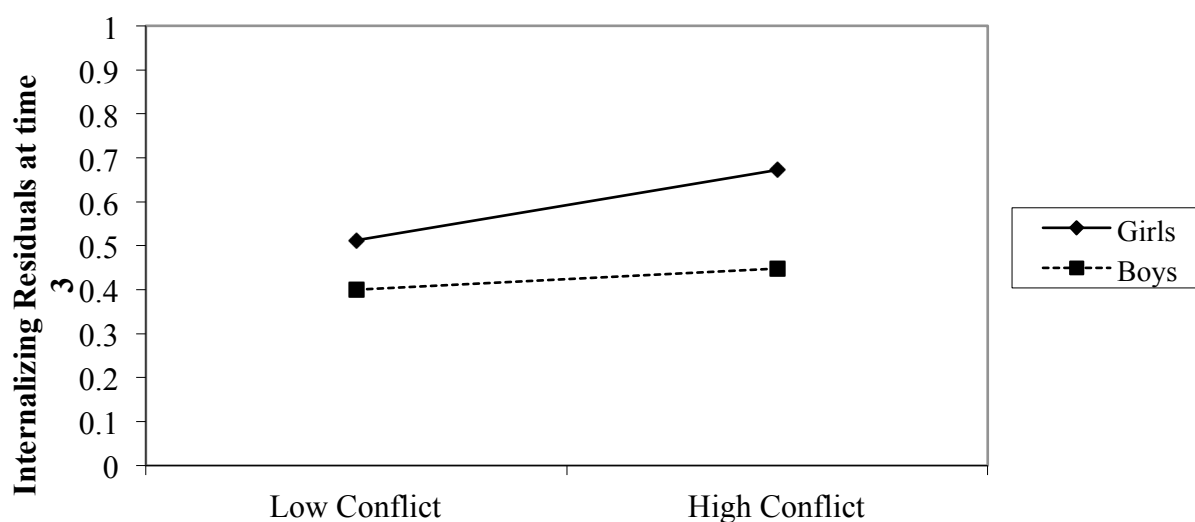
Plot of the interaction between predictor variables

Figure 2. Shows the interaction between the level of teacher-child conflict in kindergarten on internalizing problems in grade one in regards to child gender.

Summary of major findings

Overall, results indicated that internalizing problems, peer victimization and conflict within the teacher-child relationship are evident at a young age. Correlational analysis indicated that parent-rated peer victimization is predictive of internalizing problems concurrently and longitudinally in the early primary years, but not correlated with change in internalizing behaviours. Partial and semipartial correlations further showed that parent-rated victimization only accounted for .1% of the variance in the model when al other variables were partialled out, but conflict in the teacher-child relationship accounted for 2% of the variance in the model. Teacher-rated peer victimization was not significantly associated with internalizing problems concurrently or over the years, whereas, teacher-reported victimization and teacher-child relationship conflict were positively correlated over the years. Concurrent correlations of teacher-child warmth in grade one showed that warmth was negatively correlated to parent and teacher-reported peer victimization and internalizing behaviour problems, but over the years teacher-child warmth did not have significant correlations with any variables.

Longitudinal regression analysis controlling for prior internalizing scores showed that teacher-child conflict is an important predictor of young children's internalizing problems, with teacher-child conflict in kindergarten being a significant predictor of grade one internalizing behaviours. While the quality of the teacher-child relationship (i.e., conflict or warmth) was not found to moderate the relationship between peer victimization and internalizing problems, regression analysis to test the child gender moderation hypothesis revealed that gender did moderate the relationship between teacher-child relationship conflict and internalizing problems a year later. The only significant main effects were that of kindergarten internalizing behaviours, teacher-child conflict and child gender, and when gender, teacher-child warmth and conflict were added to the model it contributed to 3% of the variance in children's grade one internalizing problems. The interaction of gender and teacher-child conflict on grade one

internalizing behaviours was the only significant two-way interaction at $p < .05$. Figure 3

illustrates the path model for the final multiple regression and moderation hypotheses.

Furthermore, post-hoc probing showed that both boys and girls who had high conflict with their

teacher had significantly higher internalizing problems a year later compared to those with low

levels of conflict in the teacher-child relationship, with girls evidencing higher levels of

internalizing problems and conflict over a year's span. Independent t-tests revealed that boys

did have a greater mean difference in regards to conflict in the teacher-child relationship in

comparison to girls, but when boys and girls have conflict with the teacher it appears to have a

more negative effect on girls than boys as shown in the moderation analysis, as girls had

slightly higher levels of grade one internalizing behaviour problems.

Figure 3.

Path model of final hierarchical multiple regression and moderation analyses
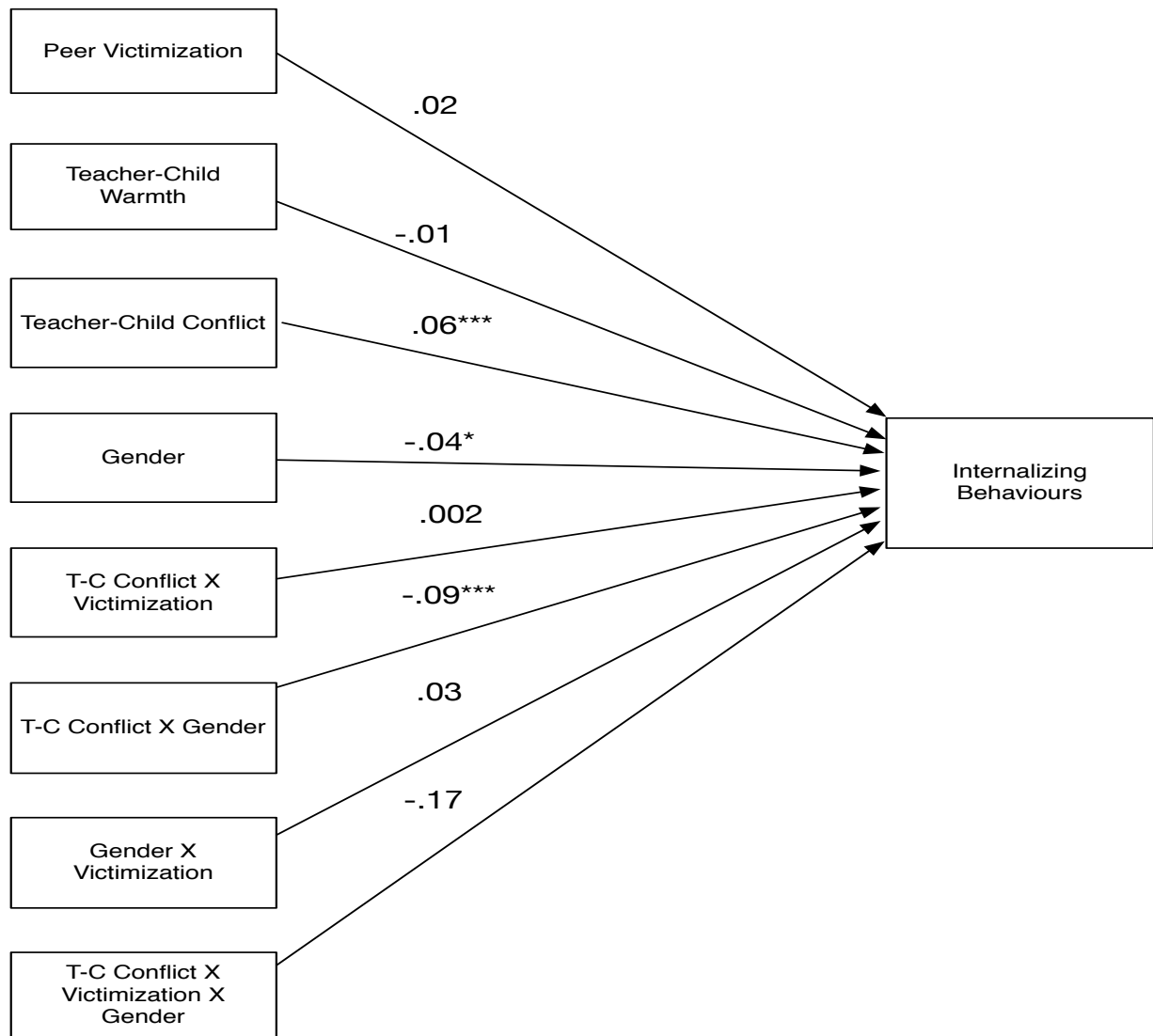
Note: The path model indicates the variables used in the final multiple regression analyses and the numbers represent the unstandardized betas with significance values signifying $p < .001$***, $p < .05$*.

Chapter 6

Discussion

The present study sought to look at processes relevant to two microsystems, and multiple contributors that could affect a child's internalizing problems, by examining not only peer relationships (i.e., peer victimization), but also the teacher-child relationship. Peer relationships have been of primary concern when examining school ecologies. Over the years, there has been a surplus of research on the effects that peer relationships, primarily peer victimization, has on child development with internalizing problems being a focal problem (e.g., Arseneault et al., 2010; Hawker & Boulton, 2000; Reijntjes et al., 2010; Zwierzynska et al., 2013). However, given the unique and prominent role that teachers play within the social ecologies of the school, it was felt that further examination of the teacher-child relationship was pertinent to expand the knowledge of how the teacher impacts children's peer relationships and psychosocial development. The overall pattern of results in the present study elucidates the importance of the longitudinal study of the teacher-child relationship on children's social and behavioural development. The first goal of the study was to examine the microsystem of peer victimization and its implications for children's internalizing behaviours, and the microsystem of the teacher-child relationship to see if it influenced the development of internalizing problem behaviours in young children over the early primary years. Secondly, the moderating effect of the teacher-child relationship quality (i.e., conflict or closeness) influenced the relationship between peer victimization and internalizing behaviours. Finally, gender was examined to see whether it had an influence on the strength of the relationship between peer victimization, teacher-child relationship quality and internalizing behaviour problems.

Internalizing behaviours in young children

The present study highlights the stability of internalizing behaviours in young children and the fact that if parents and/or carers pay attention to their children, these behaviours do not

have to go unnoticed. The significance of internalizing problems in the prekindergarten to grade one children needs to be highlighted, because still in the literature today the symptoms of internalizing problems are often minimized in young children and researchers tend to claim their instability in younger populations (e.g., Ladd and Burgess, 1999). Internalizing problems are prevalent in childhood, and it will be important to continue investigating the role that diverse microsystems play in the etiology and developmental course of these behaviours.

Independent t-tests results to compare group level differences for boys and girls' internalizing behaviours over the three years indicated that there was not a significant difference between boys and girls levels of internalizing problems in pre-kindergarten or kindergarten, but there was a significant difference in grade one, with girls evidencing higher levels of internalizing problems compared to boys. This suggests that gender does influence internalizing behaviours, but only with increased age, as significant differences between boys and girls was only evident in grade one, with girls showing higher levels of internalizing behaviours. This finding that gender differences in internalizing behaviours becomes more evident with age is in line with previous research that has reported similar findings, however with a broader age range (e.g., Bongers et al., 2003; Nolen-Hoeksema & Girgus, 1994), that girls show higher levels of internalizing problems in comparison to boys.

Peer victimization associated with internalizing behaviours

Results from correlational analyses showed that teacher-rated peer victimization was not correlated with parent-rated internalizing problem behaviours concurrently or longitudinally over the three years. Unlike parent reports, teacher reports required a more complex approach, where each teacher provided responses for multiple students, and some teachers may have been more inconsistent in how they evaluate students than other teachers, which may be why the teacher reports of victimization were not significant. Furthermore, Griffen and Gross (2004) note that teachers may not be as aware of the social nuances that goes on within the classroom

or on the playground, which also may be why their victimization reports were not significantly associated with internalizing behaviours or within the regression model. Longitudinal and concurrent parent reports of victimization were however positively associated with internalizing problems, which could be due to shared source variance (e.g., Podaskoff et al., 2003), such that parents who view their child as being victimized also simultaneously view them as having internalizing problems, or possibly parents being more attuned to their child's behaviours, actions and relationships (e.g., Shakoor et al., 2011). However, in the regression model, kindergarten parent-rated peer victimization was not predictive of internalizing problems a year later, even when kindergarten internalizing behaviours were partialled out, kindergarten parent-rated peer victimization was still not predictive of parent-rated grade one internalizing problems. Possibly the reason for the non-significant main effect of peer victimization on internalizing behaviours is due to internalizing behaviours instead predicting peer victimization at this age, as research has shown this to be probable, (e.g., Hawker & Boulton, 2000; Hodges et al., 1997; Hodges et al., 1999; Runions and Shaw, 2013). Further research should be done on young populations in order to see if the results from the present study can be replicated.

Teacher-child relationship quality associated with internalizing problems

The degree of negativity in the teacher-child relationship seems to be an especially pertinent predictor of children's internalizing behaviours during elementary school, as indicated by this study. Studies have shown that conflict within the teacher-child relationship has the most negative effects on overall school adjustment in comparison to closeness (e.g., Birch & Ladd, 1998; Howes et al., 2000; Jerome et al., 2008; Pianta et al., 1995; Pianta & Stuhlman, 2004), with conflict and negativity being strongly associated with internalizing problems (e.g., Murray & Murray, 2004; Pianta & Stuhlman, 2004). The current study found that in fact kindergarten teacher-child conflict is associated with grade one internalizing behaviours, as noted by the correlational analyses and main effect of teacher-child conflict in the regression model. The

study by Pianta and Stuhlman (2004) also showed the extent to which preschool, kindergarten, and first grade teacher perceptions of relationship quality with students were correlated with those students' social and behavioural outcomes, and mother-rated internalizing behaviour, with conflict being detrimental for children's social and behavioural outcomes. The present study replicated that teacher-child relationship conflict affects a child's behavioural outcomes, and further extends this research by looking explicitly at parent-rated internalizing behaviours the following year.

Presumably, those with more conflictual relationships were also those who had greater internalizing problems to start with, which affected the formation of the relationship in the first place. Other research has found that conflict within the teacher-child relationship was particularly disruptive for students with internalizing problems, such that children who had internalizing behaviour problems, and conflicted relationships with teachers showing poorer adjustment in the classroom (i.e., fewer positive work habits, lower reading grades) than similarly affected peers who had low degrees of conflict (e.g., Baker et al., 2008; Murray & Murray, 2004). The present study extends this research by looking not at internalizing behaviours as a predictor of the teacher-child relationship and adjustment, but instead at how the teacher-child relationship can affect internalizing problems, and more pertinently how this relationship affects children in the early primary years. Also, children who experience relationship problems with teachers may be at a greater disadvantage, due to previous relationship building problems (i.e., in their family lives). Internalizing symptoms such as sadness and withdrawal may be a result of believing others to be unavailable and potentially uninterested in caring for them, which may affect children's ability to develop supportive relationships with adults at school (Anan & Barnett, 1999). Further research will need to address the underlying reason behind the link between conflict and internalizing problems over the primary years. Different teachers rated teacher-child relationship conflict each year and

presumably, teachers rated conflictual relationships with the same children over the years due to the child's social reputation preceding them (e.g., Hymel, Wagner & Butler, 1990), which only perpetuated the development of internalizing behaviours. Therefore, further research should include path analyses of these longitudinal relationships in order to clarify the direction of effects.

Other studies have further found that teacher-child warmth is a pertinent predictor of internalizing problems (e.g., Birch & Ladd, 1998; Henricsson & Rydell, 2004; Ladd & Burgess, 1999) but in the present study teacher-child warmth was not significant in regards to internalizing behaviours a year later. The results from the present study indicated that teacher-child conflict is possibly a more prominent and detrimental characteristic within the teacher-child relationship, primarily when looking at younger populations.

Moderating role of the teacher-child relationship

Contrary to expectations on the moderating role of the teacher-child relationship, the quality of the relationship, either conflict or closeness, did not moderate the influence of peer victimization on internalizing problems. Pouwelse and colleagues (2011) also did not find that the mechanism of social support, as perceived by the child, to moderate the relationship between victimization and feelings of depression. This may represent that children at this early age are less affected by peer harassment due to the social peer processes not being of main concern at this age, or as noted above that maybe at this age internalizing problems instead predict peer victimization (e.g., Hawker & Boulton, 2000; Hodges et al., 1997; Hodges et al., 1999), and the teacher-child relationship moderates the relationship between internalizing behaviours and victimization in this way. Further analysis of the direction of effects between the relationship of peer victimization and internalizing problems is needed with a younger population in order to see how and/or under what conditions these variables relate to one another.

The non-significant moderating effect of the teacher-child relationship between peer victimization and internalizing problems does not mean that the teacher-child relationship is not an important aspect of study. It could mean that the two social microsystems work independently in the early school years, at least in regard to internalizing problems, and further supports the need for further investigation and replication, as this study has shown that conflict between the teacher and child does affect internalizing problems at this young age. Previous research has shown the moderating effect of social support (i.e., teachers) in relation to victimization and internalizing distress, particularly among boys, who typically report low levels of teacher support (e.g., Davidson & Demaray, 2007). With mixed results coming from the research surrounding the teacher-child relationship, there is a need for further replication and examination of the effects of the teacher-child relationship in relation to peer victimization and internalizing problems, as this study showed that the mesosystem impacting internalizing problems is worth it.

Furthermore, research examining whether or not children who are victimized seek out the teacher for help and what types of children seek help could assist in the understanding of the link between peer victimization, internalizing problems and the teacher-child relationship. Research by Troop-Gordon and Quenette (2010) lends some insight into the perceptions fourth to sixth grade students have in regards to how their teachers handle victimization, and the implications of teachers' responses on internalizing problems, with certain teacher responses (i.e., assertion, avoidance, independent coping) leading to internalizing distress. Thus, the relationship children have with their teacher, and how the teacher responds to peer victimization could lend insight into those students who seek out their teacher for help, and how the teacher could potentially exacerbate a child's internalizing problems. This research should be furthered with a younger population in which the definitions of peer victimization are simplified (e.g., Smith et al., 1999; Whitney & Smith, 1993) and questions are open-ended so that children are

able to reliably explain how they feel when someone victimizes them and how they perceive their teacher's responses to these incidences.

Child gender as a moderator

As childhood interpersonal relationships and social interactions have been implicated as an influence on the development of internalizing behaviours, results from this study further suggest that the specific role of teacher-child conflict may play a more instrumental role in amplifying growth in internalizing problems for girls than for boys. Gender was hypothesized to moderate the relationship between teacher-child relationship quality and internalizing problems, as the literature suggested that boys and girls may form different quality relationships with their teachers, which could exacerbate or protect against internalizing problems. When looking at change over time from kindergarten to grade one internalizing problems, it appears that conflict within the teacher-child relationship is more detrimental compared to peer victimization at this age, and that gender moderated the relationship between teacher-child conflict and internalizing problems by influencing the strength and direction of the relationship. Child gender was not found to moderate the relationship between peer victimization and internalizing behaviours. Pouwelse et al. (2011), even using an older sample of children aged 10 to 12 years old, with the children self-reporting on bullying behaviours and depressive feelings also did not find an interaction effect of gender just like the present study. The interaction effect of teacher-child relationship quality, peer victimization and gender, as well as the interaction of gender in relation to peer victimization and internalizing behaviours was non-significant in the present study. This indicates that the relationship between peer victimization and internalizing behaviours is likely to be the same for boys and girls.

Child gender was found to moderate the relationship between teacher-child relationship conflict and grade one internalizing problems. These results indicate that the relationship between teacher-child relationship conflict and internalizing behaviours is different for boys and

girls. Teacher-child conflict was more significant for girls' internalizing behaviours in comparison to boys; however, boys who had conflict with the teacher still had significant internalizing behaviours problems. This finding contradicts other research that has found conflict within the teacher-child relationship to be more representative of relationships with boys than girls, with boys evidencing higher levels of conflict and girls experiencing greater levels of closeness (e.g., Birch & Ladd, 1997, 1998; Saft & Pianta, 2001), which further affected boys school adjustment (i.e., school liking, prosocial behaviour). In the present study, conflict in the relationship was somewhat more detrimental for girls' internalizing problems, which may suggest that girls may cope or deal with conflict differentially than boys, either by ruminating, constantly worrying, or internalizing the negativity (Nolen-Hoeksema et al. 2008; Taylor, Klein, Lewis, Gruenewald, Gurung, & Updegraff, 2000) or possibly because it is less common for girls to have conflictual teacher-child relationships. However, since there was only a slight – albeit significant - difference between boys and girls internalizing behaviour problems it may also show that at this early primary age both boys and girls want to please and be close to their teachers, so when there is conflict in the relationship it can be stressful for children and lead to subsequent internalizing problems. Further research would do well to utilize self-reports of child perceptions on their beliefs of what they feel characterizes a close or conflictual relationship, and what they value in a classroom and within their relationships with teachers (i.e., social harmony; power assertion) in order to develop a better picture of why teacher-child relationships are important for girls and boys' internalizing problems.

Limitations

When analyzing children's behavioural development and their relationships, one has to be conscious of the small part of the child's ecology and experiences one is able to study at a point in time. For this study, there are likely to be many factors that can potentially affect the quality of teacher-child relationships and internalizing problems behaviours. Therefore, the

results should be interpreted in the context of several limitations that warrant discussion. A first limitation of the study is only utilizing parent-ratings of internalizing behaviours. Although self-reports of internalizing problems are desirable, Zahn-Waxler et al. (2000) note that children are possibly not able to vocalize their internalizing behaviours at this young age, which is why parent reports were believed to be more valid and reliable at this age. Parent reports can be expected to reflect observable behaviour and affect, and accordingly, measurement of their child's internalizing problems may be somewhat conservative, and not sensitive to non-observable symptoms of internalizing distress, and parent reports are somewhat subject to child's disclosure. However, at this age it was felt that parents know their children well, and are able to know when something is bothering or wrong with their child.

Secondly, the present study did receive peer victimization ratings from parents and teachers, with only parents being primarily used in the regression analysis. Reports from children themselves or peers on the experiences of peer victimization could have possibly provided a better representation of peer victimization. Just like internalizing behaviour reports, parent reports of peer victimization are subject to the disclosure of such experiences from the child, however, Whitney and Smith (1993) found that children do tell their parents about peer experiences, but that younger children tend to characterize bullying in a more simplistic way of other children "being nasty to you or fighting with you".

Another limitation was not having a measure of dependency within the teacher-child relationship, as studies have shown that internalizing problems are quite often associated with dependency in the teacher-child relationship (e.g., Arbeau et al., 2010; Howes et al., 1994; Rudasill & Rimm-Kaufman, 2009). Not having a measure of dependency potentially affected the significance of results, and having this measure could have potentially replicated findings from research with older children that have found links between peer victimization and internalizing problems being moderated by a dependent teacher-child relationship (e.g., Troop-

Gordon & Koop, 2011).

      Furthermore, not having an extremely large sample size was a limitation, especially when examining three-way interactions. Typically larger sample sizes are needed in order to detect higher three-way interactions in non-experimental designs (Judd, McClelland, & Culhane, 1995). A post-hoc calculation to see what size of sample I would have needed to find a significant three-way interaction was calculated using G*Power. In order to obtain just a small effect size of .20 (Cohen, 1988) and a significant three-way interaction ($p < .05$), a sample size of 652 would have been needed. Therefore, future studies with larger sample sizes should look at the interaction between peer victimization, internalizing problems and the moderating effects of the teacher-child relationship and gender. As with every study, some things were beyond the scope and timeframe of the present study, and yet overall, this study contributes to the growing body of research documenting that relationships do matter and may affect the trajectory of children's well-being, and social and behavioural development.

Implications of research findings

      The findings from the present study have important practical implications for teacher training. Most important, the findings address the significance of conflict within the teacher-child relationship, and how teachers and teacher-child relationships play an important role in determining children's social and behavioural development. Therefore, an important starting point in intervention efforts would be to work with teachers in ways that help them recognize the importance of their relationships with students (Pianta, 1999) and by focusing on strategies and ways to minimize conflict and increase closeness with students. However, most approaches for pre-service teacher training on strategies to decrease conflict with students are predicated on students presenting with externalizing behaviours and very few strategies for students who have internalizing behaviours (e.g., Walker, Severson, Feil, Stiller, & Golly, 1998), and given that this study has shown that conflict is detrimental for children with internalizing behaviours,

interventions need to focus on teacher-child conflict beginning in the early school years and on children who are presenting with internalizing difficulties. The Banking Time approach reported by Driscoll and Pianta (2010) may be one such intervention strategy that could work to reduce conflict in the teacher-child relationship by increasing teacher perceptions of closeness. This approach has shown utility with Head Start school students, but more research must be done in order to see if it is an effective strategy.

Furthermore, teachers and children both play an important role in determining the quality of teacher-child relationship, and both should be included in intervention efforts. Many studies have looked directly at how the child characteristics (i.e. behaviour problems, social skills, and demographics) affect the formation of the teacher-child relationship, but the present study and corresponding research (e.g., Saft & Pianta, 2001) show how teachers too affect children's behaviours and the relationship formed. Working with teachers and children, particularly those with conflictual relationships or children with internalizing problems, should be of primary intervention focus as teacher-child relationships have detrimental effects for a child's social and emotional development. Socio-emotional supportive strategies have been successful with children who have internalizing-like problems, in which these strategies have helped teachers build relationships with students and helped children build relationships with peers (e.g., Thijs, Koomen, &Van Der Leij, 2006). Such socio-emotional supportive strategies involve the teacher being encouraging of the student, encouraging them to socialize with others, building a personal relationship and being sensitive to children's feelings and needs (Coplan & Arbeau, 2008). Teachers need to be aware of the differing strategies that they can use in order to build healthy and warm relationships, and teachers need to understand that children have differing needs, and at times the teacher may need to alter the way they teach or interact with students.

Conclusions

This study aimed to extend previous research by bridging the gap between two microsystems that surround young children, the peer group and the teacher-child relationship, by means of examining the effects of peer victimization and teacher-child relationship quality on child internalizing behaviours. In addition, it investigated ways of looking at influencing variables on children's internalizing behaviours by examining the moderating effects of the teacher-child relationship and child gender. Results of the current study indicated that while the teacher-child relationship did not moderate the relationship between peer victimization and internalizing problems, conflict in the teacher-child relationship is harmful and predictive of children's internalizing behaviours. In contrast, teacher-child warmth was not a significant predictor of child internalizing behaviours, nor was peer victimization. Finally, the current study indicated that child gender did influence the relationship between teacher-child relationship conflict and internalizing behaviours, and when there was high conflict in the teacher-child relationship, both girls and boys had higher levels of internalizing problems a year later. Furthermore, the present study used multiple informants to avoid shared source variance and this provided a more valid depiction of how teacher-child conflict, as reported by the teacher, affects children's internalizing problems, as reported by the parent, a year later.

These results suggest that teacher-child relationship conflict is a significant predictor of both girls and boys internalizing behaviours. While there were a number of limitations in the study, results buttress the findings of previous research in the area of teacher-child relationships and internalizing behaviours, and provide support that the teacher-child relationship is important and plays a key role in the development and possible maintenance of children's internalizing behaviours. Teachers are the most important of the professionals in the school with responsibilities to not only teach, but also to understand, care, help and support the children in their development, which is why teachers need to be aware of the implications they have on a

child's development when there is conflict, and a lack of support and warmth in the

relationship.

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Appendix A

First Parent Active Consent Letter

Dear Parent of <school name> student entering Pre-Primary in 2007

An invitation to participate in the Childhood Aggression Prevention (CAP) Project.

The Child Health Promotion Research Centre (CHPRC) at Edith Cowan University seeks your participation in an innovative research project focused on the prevention of aggression and the promotion of healthy emotional and social development in young children. The project, which will involve children in their Pre-Primary year, will work to ensure that all children are valued, respected and included members of their class and that they have effective strategies for managing their emotions and behaviour. Your school principal, <principal name>, believes this is an important project and has approved participation by your child's school.

Why a Childhood Aggression Prevention (CAP) Project?

As the parent/guardian of a Kindergarten student, you know that sometimes young children can become overwhelmed by their emotions and their behaviour can be difficult to manage. Children are still developing the ability to effectively control their emotions and their behaviour when they start school. In these early years, children are going through important emotional developments (e.g., in their ability to express and manage their own feelings and behaviour) and social developments (e.g., their ability to get along with others).

It is important for your child's education that all children in the class learn to control their aggression as best they can. Reducing the levels of disruption and aggression allows teachers to focus on their teaching rather than behaviour management and helps to ensure that all children feel they belong and are accepted by their peers.

What is the CAP Project?

The CHPRC is working with schools to develop strategies to address the social and emotional development of children, and to prevent problems with aggression. With the help of your child's school and other schools, Healthway, and the W.A. Department of Education and Training, the CHPRC will test a comprehensive classroom-based program to help reduce aggressive behaviours in young children. This program is designed to reduce aggression and disruptive behaviours, limit the problems that arise from these behaviours and build children's capacity to play and learn in ways that result in positive outcomes.

We need your help to figure out how well the CAP project works and to find out how it helps children. Your child's Pre-Primary class will be involved in the CAP program next year (2007). But we need your help this year. We need you to complete a very brief questionnaire about your child in Term 4, 2006. The Kindergarten teacher will complete a similar questionnaire. From these, we will sample children in the classroom to follow more closely over the next two years. Parents of these children will fill out two surveys, once at the end of 2007, and again in 2008. We will also be asking teachers to fill out a similar survey about the children in this sample. At the end of 2007 and the end of 2008, we will conduct an in-class interview with the selected sample of children. Also, for all children participating in the study, a set of student photos will be compiled into a booklet to be used to conduct an assessment where children privately indicate their responses to questions about their classmates' behaviours, and indicate which children are their friends. These photos and booklets are kept completely confidential and will be destroyed according to Edith Cowan University policies.

What do you need to know before agreeing to take part in the study?

Consent for your child's participation in the assessment of the CAP project is voluntary. We hope you will be able to help us by filling out the questionnaires about your child and by permitting your child's teachers to complete surveys about your child. But if you do not want to, you do not need to explain why to anyone. You are free to withdraw from the study at any time, with no questions asked, and all information provided to us up to that point will be destroyed. We want to ensure that you are happy being part of the process of learning about how schools can best support children's social and emotional development and improve the educational and social experiences of all the children.

Your responses provided about your child will be treated as <u>strictly confidential</u>. Your name or your child's name will not appear on any documents. Teachers, schools, parents and other individuals will not see your responses. All questionnaires and consent forms will be stored in a locked facility at Edith Cowan University accessible only to the project investigators. Schools or students will not be named in any publications resulting from this project. The interviews that will be conducted with some of the children will take place during class time with trained Edith Cowan University researchers under the supervision of your child's teacher.

Further Information

If you would like clarification or further information, please contact the Project Coordinator, ████████████ on ███████████ or by email.

Next Step

If you WILL ALLOW your child to participate in the CAP project please complete the enclosed consent form and return it in the reply-paid envelope provided (or fax it to us at ████ ████) as soon as possible before **Friday 18th August**.

If you DO NOT ALLOW your child to participate in the CAP Project please complete the consent form enclosed and return it in the reply paid envelope provided by **Friday 18th August.**

When you <u>return your signed permission forms (regardless of your decision about participation)</u>, you will be automatically entered into a raffle to ***win one of two $100 Coles/Myer gift vouchers***.

> We believe that the CAP project will result in an improved educational experience for children.
>
> **But we can't do it without you.**

Yours sincerely,

Kevin Runions, Ph.D.

Project Director

Dear Parent/Guardian

If you GIVE PERMISSION for your son or daughter to participate in the CAP Project in 2006, 2007 and 2008 as outlined in the information letter attached, please tick the appropriate box, complete the other details and return it to the CHPRC in the reply-paid envelope provided by **Friday 18th August**. *You or your son or daughter may withdraw consent to participate in the CAP Project at any time, without prejudice.*

If you DO NOT GIVE PERMISSION for your son or daughter to be involved in the CAP Project in 2006, 2007 and 2008, please tick the appropriate box, complete the other details and return it to the CHPRC in the reply-paid envelope provided by **Friday 18th August**.

☐ **I GIVE PERMISSION FOR** _____ (your son/daughter's full name) to participate in the assessment of the CAP project and would like to help out as outlined above.

Parent/Guardian Name: _____

Parent/Guardian Signature: _____ Date: _____

Your Postal Address *(for mailing project information)*:

_____

_____

Name of the Pre-Primary School your son or daughter is likely to attend in 2007:

_____

I have read the information pages explaining the project and I have contacted the investigators to ask any questions that I had about the project. I have had my questions answered to my satisfaction.

<Sch ID # to be inserted here>

OR

☐ **I DO NOT GIVE PERMISSION FOR**_____ (your son/daughter's full name) to participate in the assessment of the CAP Project and I do not want to take part in the assessment as outlined above.

Parent/Guardian Name: _____
Parent/Guardian Signature: _____ Date: _____

<Sch ID # to be inserted here>

**Please return this consent form in the reply paid envelope provided
by Friday 18th August 2006.**

Parent Passive Consent Letter

Childhood Aggression Prevention

> **If you have already sent in the consent form, please disregard this.**
>
> **Otherwise, please read on!**

Dear Parent of <school name> student entering pre-primary in 2007

An invitation to participate in the Childhood Aggression Prevention (CAP) Project.

The Child Health Promotion Research Centre (CHPRC) at Edith Cowan University (ECU) seeks your participation in an innovative research project focused on the prevention of aggression and the promotion of healthy emotional and social development in young children. The project, which will involve the whole class of children in their pre-primary year at <school name>, will work to ensure that all children have effective strategies for managing their emotions and behaviour. Your school principal, <principal name>, believes this is an important project and has approved participation by your child's school.

What is the CAP Project?

The CHPRC is working with schools to develop strategies to address the social and emotional development of children, and to prevent problems with aggression. With the help of your child's school and other schools, Healthway and the W.A. Department of Education and Training, the CHPRC will test a comprehensive classroom-based program to help reduce aggressive behaviours in young children. This program is designed to reduce aggression and disruptive behaviours, limit the problems that arise from these behaviours and build children's capacity to play and learn in ways that result in positive outcomes for individuals and the group.

Your child's pre-primary class will be involved in the CAP program next year (2007). We need your help to figure out how well it works and to find out how it helps children. In our previous letter, we outlined that we need you to complete a very brief questionnaire about your child at the end of Term 3 and that the kindergarten teacher will also complete this questionnaire. From these we will sample children, including both boys and girls showing behaviour difficulties and those who are not, to follow more closely over the next two years. Teachers of these children will fill out two surveys, once at the end of 2007, and again in 2008.   The information we get from this is crucial for us to determine the effectiveness of the CAP Project.   At the end of 2007 and the end of 2008, we will conduct an in-class interview with the selected sample of children. The interviews that will be conducted with some of the children will take place during class time with trained ECU researchers under the supervision of your child's teacher. Also, for all children participating in the study, a set of student photos will be compiled into a booklet to be used to conduct an assessment where children privately indicate their responses to questions about their classmates' behaviours, and indicate which children are their friends. As with all the data from the CAP Project, these photos and booklets will be kept **completely confidential**, will never be seen by anyone outside of the CAP Project research team and will be shredded after project completion, according to ECU Ethics policies.

What do you need to know before agreeing to take part in the study?

Consent for your child's participation in the assessment of the CAP project is voluntary. We hope you will be able to help us by filling out the questionnaires about your child and to permit your child's teachers to complete their assessments, but if you do not want to, you do not need to explain why to anyone. You are free to withdraw from the study at any time, with no questions asked, and all information provided to us up to that point will be destroyed. We want

to ensure that you are happy being part of the process of learning about how schools can best support children's social and emotional development and improve the educational and social experiences of all the children.

Your responses provided about your child will be treated as **strictly confidential**. Your name or your child's name will not appear on any documents and data on individual children - including photos - will not be seen by anyone from your child's school, Healthway, the W.A. Department of Education and Training or anyone outside of the CAP Project team. All questionnaires, photo booklets and consent forms will be stored in a locked facility at Edith Cowan University accessible only to the project investigators and destroyed after project completion according to ECU Ethics policies. Schools or students will not be named in any publications resulting from this project.

Further Information

If you would like clarification or further information, please contact the Project Coordinator, ██ ████████ on ████████ or by email.

Next Step

If you WILL ALLOW your child to participate in the CAP project assessment, you do not need to take any action. *You or your son or daughter may withdraw consent to participate in the CAP Project at any time, without prejudice.*

If you do not want your son or daughter to take part in any assessment of the CAP Project, please complete the consent form enclosed and return it in the reply paid envelope provided before **Wednesday 27th September 2006**.

Yours sincerely

Kevin Runions, Ph.D.

Project Director

If you **DO NOT GIVE PERMISSION** for your son/daughter to participate in the assessments of the CAP Project please tick the box below and return this form in the reply paid envelope provided by **Wednesday 27th September 2006.**

Childhood Aggression Prevention

☐ **I DO NOT GIVE PERMISSION** for my child to participate in the assessment of the CAP Project and I do not want to take part in the assessment as outlined in the information letter.

Child's Full Name: _____

Parent/Guardian Name: _____

Parent/Guardian Signature: _____ Date: _____   *<Sch ID # >*

Teacher Consent Letter

Dear _____,

An invitation to participate in the Childhood Aggression Prevention (CAP) Project.

The Child Health Promotion Research Centre (CHPRC) at Edith Cowan University seeks your participation in an innovative research project focused on the prevention of aggression and the promotion of healthy emotional and social development in young children. Your school Principal believes this is an important project and has approved participation by your school.

What is the Childhood Aggression Prevention (CAP) Project?

As a teacher, you know that sometimes young children can become overwhelmed by their emotions and their behaviour can be difficult to manage. Children are still developing the ability to effectively control their emotions and their behaviour when they start school. In these early years, children are going through important emotional developments (e.g., in their ability to express and manage their own feelings and behaviour) and social developments (e.g., their ability to get along with others).

The CHPRC is working with schools to develop strategies to address the social and emotional development of children, and to prevent problems with aggression. With the help of your school and 23 other schools, Healthway and the W.A. Department of Education and Training, the CHPRC will test a comprehensive classroom-based program to help reduce aggressive behaviours in young children. This program is designed to reduce aggression and disruptive behaviours, limit the problems that arise from these behaviours and build children's capacity to play and learn in ways that result in positive outcomes for individuals and the group.

Your Participation
However, we need your help to make this project work. The principal of your school has identified you as currently teaching a kindergarten class. We need to obtain an initial assessment of the emotional and social development of children in your class. So to do this, we ask that you:
- Complete a survey on all the students in your class toward the end of this school year. This survey is important as a "baseline" measure and to see which children are most helped by the CAP intervention. This survey also includes items about your relationship with the students and some general questions about your approach to teaching;
- Assist in distributing, tracking, and collecting surveys to parents.

We will compensate you by paying a full day's teacher relief for your time spent in completing the surveys on the children.

We believe that the CAP project will result in an improved educational experience for children.
But we can't do it without you.

What do you need to know before agreeing to take part in the study?

We want to ensure that you are happy being part of the process of learning about how schools can best support children's social and emotional development and improve the educational and social experiences of all the children.

Your responses to the survey will be treated as <u>strictly confidential</u>. Your name will not appear on any documents and no one outside of the CAP research team will have access to your data. All questionnaires and consent forms will be stored in a locked facility at Edith Cowan University accessible only to the project investigators. No schools, teachers, or students will be named in any publications resulting from this project.

Further Information

If you would like clarification or further information, please feel free to discuss the project with your principal or contact the Project Director, ███████████ on ██████████ or by email.

Yours sincerely,

Kevin Runions, Ph.D.

Project Director

The nature of the study, and the expectations for my involvement, have been explained to me. I have read this information and consent form and understand its contents. I have been given the opportunity to ask questions, and I am satisfied with response I have obtained. I understand that this project is approved by the research ethics committee of Edith Cowan University, by the Department of Education and Training, and by my principal. I freely consent to participate in the Childhood Aggression Prevention Project.

Teacher's Name: _____

School Name: _____

Teacher's Consent Signature: _____   Date: _____

Appendix B

2f. STUDENT-TEACHER RELATIONSHIP SCALE – SHORT FORM

Robert C. Pianta

Child: _____ Teacher:_____

Grade:_____

Please reflect on the degree to which each of the following statements currently applies to your relationship with this child. Using the scale below, circle the appropriate number for each item.

Definitely does not apply 1	Not really 2	Neutral, not sure 3	Applies somewhat 4	Definitely applies 5

1.	I share an affectionate, warm relationship with this child.	1	2	3	4	5
2.	This child and I always seem to be struggling with each other.	1	2	3	4	5
3.	If upset, this child will seek comfort from me.	1	2	3	4	5
4.	This child is uncomfortable with physical affection or touch from me.	1	2	3	4	5
5.	This child values his/her relationship with me.	1	2	3	4	5
6.	When I praise this child, he/she beams with pride.	1	2	3	4	5
7.	This child spontaneously shares information about himself/herself.	1	2	3	4	5
8.	This child easily becomes angry with me.	1	2	3	4	5
9.	It is easy to be in tune with what this child is feeling.	1	2	3	4	5
10.	This child remains angry or is resistant after being disciplined.	1	2	3	4	5
11.	Dealing with this child drains my energy	1	2	3	4	5
12.	When this child is in a bad mood, I know we're in for a long and difficult day.	1	2	3	4	5
13.	This child's feelings toward me can be unpredictable or can change suddenly.	1	2	3	4	5
14.	This child is sneaky or manipulative with me.	1	2	3	4	5
15.	This child openly shares his/her feelings and experiences with me.	1	2	3	4	5

Appendix C

Teacher Social Behaviour Questionnaire

SECTION 2a: *STUDENT'S BEHAVIOUR*

The following statements relate to a child's possible behaviour while in class. We would like to ask you several questions regarding how _____ has felt or acted **over the past 6 months.**

Using your knowledge of the student, indicate which answer, from your point of view, best describes the behaviours of this child. Even if this seems difficult, it is important to respond to all of the statements. If the behaviour is never manifested, or if you are unable to evaluate the behaviour, answer *never or not true.*

Within the past 6 months, how many times would you say that the child:	**Never or not true**	**Sometimes or a little true**	**Often or very true**
1. .. if there was a quarrel or dispute, tried to stop it?	1	2	3
2. ...could not sit still, was restless or hyperactive?	1	2	3
3. ...damaged or broke his/her own things?	1	2	3
4. ...gave up easily?	1	2	3
5. ...tried to help someone who has been hurt?	1	2	3
6. ...wanted to communicate with one of his/her parents while he/she was at school ?	1	2	3
7. ...was shy with children he/she didn't know?	1	2	3
8. ...stole things?	1	2	3
9. ...invited a child to join in a game?	1	2	3
10. ...was defiant or refused to comply with adults' requests or rules?	1	2	3
11. ...was jumpy for no reason?	1	2	3
12. ...did not hesitate to admit he/she was wrong in order to end an argument with a	1	2	3

Within the past 6 months, how many times would you say that the child:	Never or not true	Sometimes or a little true	Often or very true
friend or a classmate?			
13. ...seemed to be unhappy or sad?	1	2	3
14. ...has boasted in an excessive manner?	1	2	3
15. ...got into fights?	1	2	3
16. ...showed little interest in activities involving other children?	1	2	3
17. ...volunteered to clean up a mess that someone else has made?	1	2	3
18. ... encouraged other children to pick on a particular child?	1	2	3
19. ...was easily distracted, had trouble sticking to any activity?	1	2	3
20. ...showed little interest in games, outings, or other amusing activities?	1	2	3
21. ...has manipulated or used others?	1	2	3
22. ...was made fun of by other children?	1	2	3
23. ...when mad at someone, tried to get others to dislike that person?	1	2	3
24. ...acted without thinking?	1	2	3
25. ...didn't seem to feel guilty after misbehaving?	1	2	3
26. ...preferred to play alone rather than with other children?	1	2	3
27. ...has engaged himself/herself in risky or dangerous activities?	1	2	3
28. ...was preoccupied by the loss or that something could happen to his/her parents?	1	2	3
29. ...was not as happy as other children?	1	2	3

Within the past 6 months, how many times would you say that the child:	Never or not true	Sometimes or a little true	Often or very true
30. ...readily approached children that he/she didn't know?	1	2	3
31. ...avoided the company of other children?	1	2	3
32. ...damaged or broke things belonging to others?	1	2	3
33. …reacted in an aggressive manner when teased?	1	2	3
34. ...jumped from one activity to another?	1	2	3
35. ...couldn't stop fidgeting?	1	2	3
36. …has been absent from school?	1	2	3
37. ...was hit or pushed by other children?	1	2	3
38. ...was unable to concentrate, could not pay attention for long?	1	2	3
39. …was too fearful or anxious ?	1	2	3
40. ...tried to dominate other children?	1	2	3
41. ...held a grudge for a long time towards a friend or a classmate after he/she had an argument with that child?	1	2	3
42. ...was unable to wait when someone promised him/her something?	1	2	3
43. ...has been insensitive to other people's feelings?	1	2	3
44. ...when mad at someone, became friends with another as revenge?	1	2	3
45. ...didn't change his/her behaviour after punishment?	1	2	3
46. ...took a long time to warm up to children he/she didn't know?	1	2	3

Within the past 6 months, how many times would you say that the child:	Never or not true	Sometimes or a little true	Often or very true
47. ...interrupted conversations or games of others?	1	2	3
48. ...was impulsive, acted without thinking?	1	2	3
49. ...had no energy, was feeling tired?	1	2	3
50. ... told lies or cheated?	1	2	3
51. ...reacted in an aggressive manner when contradicted?	1	2	3
52. ... was worried ?	1	2	3
53. ...scared other children to get what he/she wanted?	1	2	3
54. ...had difficulty waiting for his/her turn in games?	1	2	3
55. ...when somebody accidentally hurt him/her (such as bumping into him/her), he/she reacted with anger and fighting?	1	2	3
56. ...tended to do things on his/her own, was rather solitary?	1	2	3
57. ...has not kept his/her promises?	1	2	3
58. ...when mad at someone, said bad things behind the other's back?	1	2	3
59. ...physically attacked people?	1	2	3
60. ...comforted a child (friend, brother or sister) who was crying or upset?	1	2	3
61. ...cried a lot?	1	2	3
62. ...committed any acts of vandalism?	1	2	3
63. ...clung to adults or was too dependent?	1	2	3
64. ...was called names by other children?	1	2	3
65. ...sought the company of other children?	1	2	3

Within the past 6 months, how many times would you say that the child:	Never or not true	Sometimes or a little true	Often or very true
66. ...couldn't settle down to do anything for more than a few moments?	1	2	3
67. ...was nervous, high-strung or tense?	1	2	3
68. ...hit, bit, or kicked other children?	1	2	3
69. ...reacted in an aggressive manner when something was taken away from him/her?	1	2	3
70. ...was inattentive?	1	2	3
71. ...has made faces or mean gestures secretly behind another child's back?	1	2	3
72. ...tried to make up with a child with whom he/she had an argument?	1	2	3
73. ...had trouble enjoying him/herself?	1	2	3
74. ...helped other children (friends, brother or sister) who were feeling sick?	1	2	3
78. …his/her emotions appear superficial?	1	2	3

These questions are about your child in general	Never or not true	Sometimes or a little true	Often or very true
79. ...can detect if someone lied?	1	2	3
80. ...rarely smiles?	1	2	3
81. ...can not guess the intentions of others?	1	2	3
82. …easily perceives the feelings of others?	1	2	3
83. ... knows how to make others laugh?	1	2	3
84. ...says that he/she is not as good as the other children?	1	2	3
85. ... is able to persuade others to do what he/she wanted?	1	2	3

Parent Social Behaviour Questionnaire

SECTION 3a: *YOUR CHILD'S BEHAVIOUR*

The following statements relate to your child's possible behaviour. We would like to ask you several questions regarding how your child has felt or acted **over the past 6 months.**

Using your knowledge of the child, indicate which answer, from your point of view, best describes the behaviours of this child. Even if this seems difficult, it is important to respond to all of the statements. If the behaviour is never manifested, or if you are unable to evaluate the behaviour, answer *never or not true.*

Within the past 6 months, how many times would you say that the child:	**Never or not true**	**Sometimes or a little true**	**Often or very true**
1. ... if there was a quarrel or dispute, tried to stop it?	1	2	3
2. …could not sit still, was restless or hyperactive?	1	2	3
3. …damaged or broke his/her own things?	1	2	3
4. …gave up easily?	1	2	3
5. …tried to help someone who has been hurt?	1	2	3
6. …was shy with children he/she didn't know?	1	2	3
7. …stole things?	1	2	3
8. …invited a child to join in a game?	1	2	3
9. …was defiant or refused to comply with adults' requests or rules?	1	2	3
10. …was jumpy for no reason?	1	2	3
11. …did not hesitate to admit he/she was wrong in order to end an argument with a friend?	1	2	3
12. …seemed to be unhappy or sad?	1	2	3
13. …got into fights?	1	2	3
14. …showed little interest in activities involving other children?	1	2	3

Within the past 6 months, how many times would you say that the child:	Never or not true	Sometimes or a little true	Often or very true
15. …volunteered to clean up a mess that someone else had made?	1	2	3
16. … encouraged other children to pick on a particular child?	1	2	3
17. …was easily distracted, had trouble sticking to any activity?	1	2	3
18. …showed little interest in games, outings, or other amusing activities?	1	2	3
19. …was made fun of by other children?	1	2	3
20. …when mad at someone, tried to get others to dislike that person?	1	2	3
21. …acted without thinking?	1	2	3
22. …did not seem to feel guilty after misbehaving?	1	2	3
23. …preferred to play alone rather than with other children?	1	2	3
24. …was preoccupied by the loss or that something could happen to his/her parents?	1	2	3
25. …was not as happy as other children?	1	2	3
26…readily approached children that he/she didn't know?	1	2	3
27…avoided the company of other children?	1	2	3
28…damaged or broke things belonging to others?	1	2	3
29…reacted in an aggressive manner when teased?	1	2	3
30 …jumped from one activity to another?	1	2	3
31…couldn't stop fidgeting?	1	2	3

| Within the past 6 months, how many times would you say that the child:	Never or not true	Sometimes or a little true	Often or very true
32. …was feeling unwell, for example, had stomach aches, headaches, nausea, when separated from his/her parents?	1	2	3
33. …was hit or pushed by other children?	1	2	3
34. …was unable to concentrate, could not pay attention for long?	1	2	3
35. …was too fearful or anxious ?	1	2	3
36. …tried to dominate other children?	1	2	3
37. …held a grudge for a long time towards a friend or a classmate after he/she had an argument with that child?	1	2	3
38. …was unable to wait when someone promised him/her something?	1	2	3
39. …when mad at someone, became friends with another person as revenge?	1	2	3
40. …didn't change his/her behaviour after punishment?	1	2	3
41. …took a long time to warm to children he/she didn't know?	1	2	3
42. …interrupted conversations or games of others?	1	2	3
43. …was impulsive, acted without thinking?	1	2	3
44. …had no energy, was feeling tired?	1	2	3
45. … told lies or cheated?	1	2	3
46. …reacted in an aggressive manner when contradicted?	1	2	3
47. … was worried ?	1	2	3
48. …scared other children to get what he/she wanted?	1	2	3

| Within the past 6 months, how many times would you say that the child:	Never or not true	Sometimes or a little true	Often or very true
49. …had difficulty waiting for his/her turn in games?	1	2	3
50. …when somebody accidentally hurt him/her (such as bumping into him/her), he/she reacted with anger and fighting?	1	2	3
51. …tended to do things on his/her own, was rather solitary?	1	2	3
52. …when mad at someone, said bad things behind the other's back?	1	2	3
53. …physically attacked people?	1	2	3
54. …comforted a child (friend, brother or sister) who was crying or upset?	1	2	3
55. …cried a lot?	1	2	3
56. …committed any acts of vandalism?	1	2	3
57. …clung to adults or was too dependent?	1	2	3
58. …was called names by other children?	1	2	3
59. …sought the company of other children?	1	2	3
60. …couldn't settle down to do anything for more than a few moments?	1	2	3
61. …was nervous, highly-strung or tense?	1	2	3
62. …hit, bit, or kicked other children?	1	2	3
63. …reacted in an aggressive manner when something was taken away from him/her?	1	2	3
64. …was inattentive?	1	2	3
65. …didn't want to sleep alone	1	2	3
66. …tried to make up with a child with whom he/she had an argument?	1	2	3

Within the past 6 months, how many times would you say that the child:	**Never or not true**	**Sometimes or a little true**	**Often or very true**
67. …had trouble enjoying him/herself?	1	2	3
68. …helped other children (friends, brother or sister) who were feeling sick?	1	2	3

These questions are about your child in general	**Never or not true**	**Sometimes or a little true**	**Often or very true**
69. …can detect if someone lied?	1	2	3
70. …rarely smiles?	1	2	3
71. …can not guess the intentions of others?	1	2	3
72. …easily perceives the feelings of others?	1	2	3
73. … knows how to make others laugh?	1	2	3
74. …says that he/she is not as good as the other children?	1	2	3
75. … is able to persuade others to do what he/she wants?	1	2	3

Appendix D

Victimized kindergarten teacher report
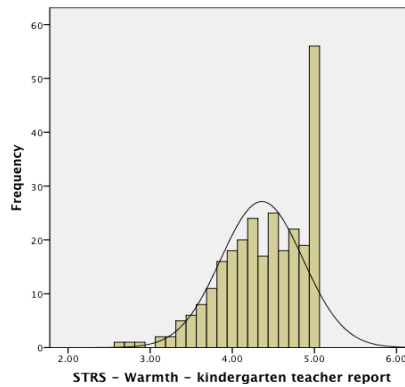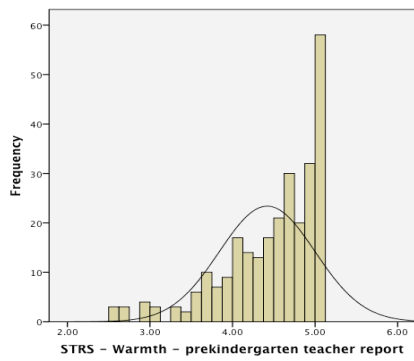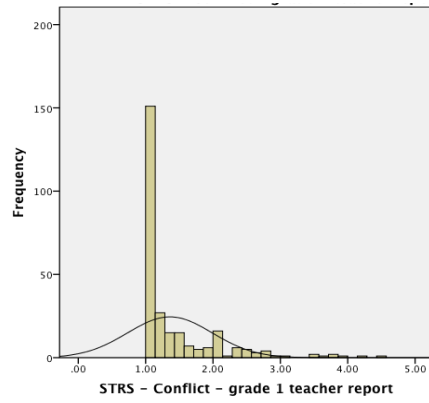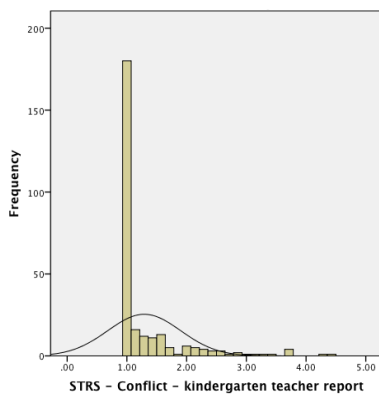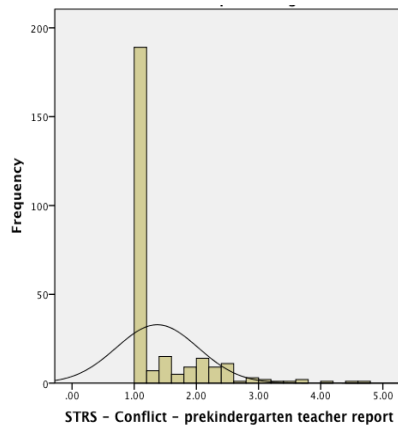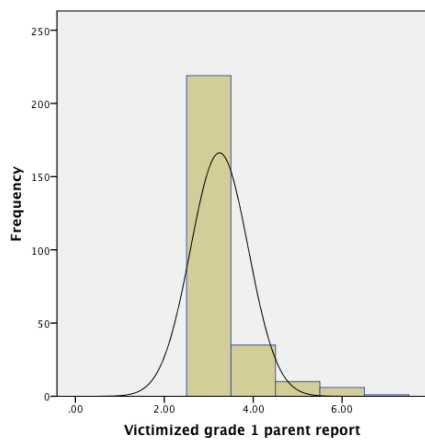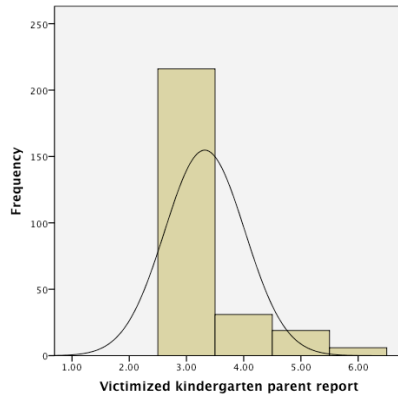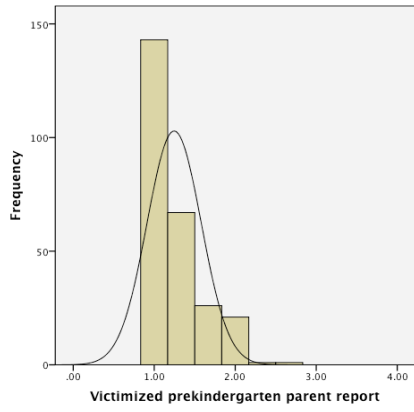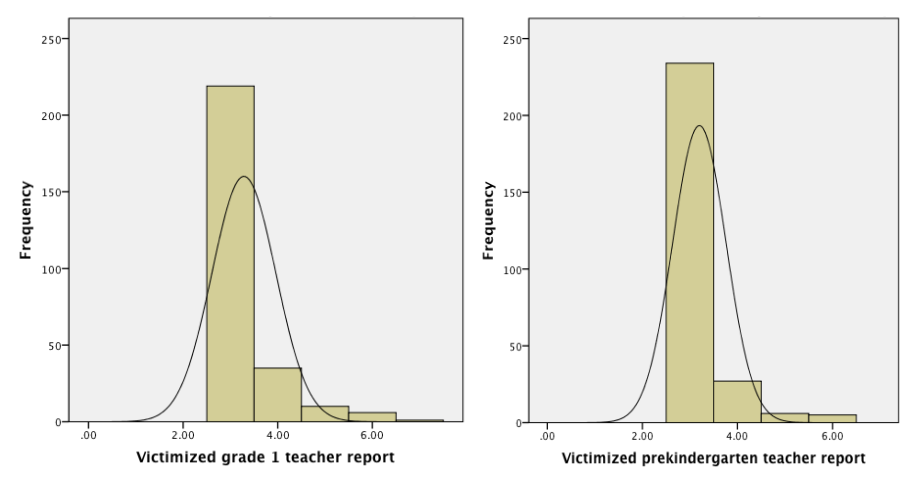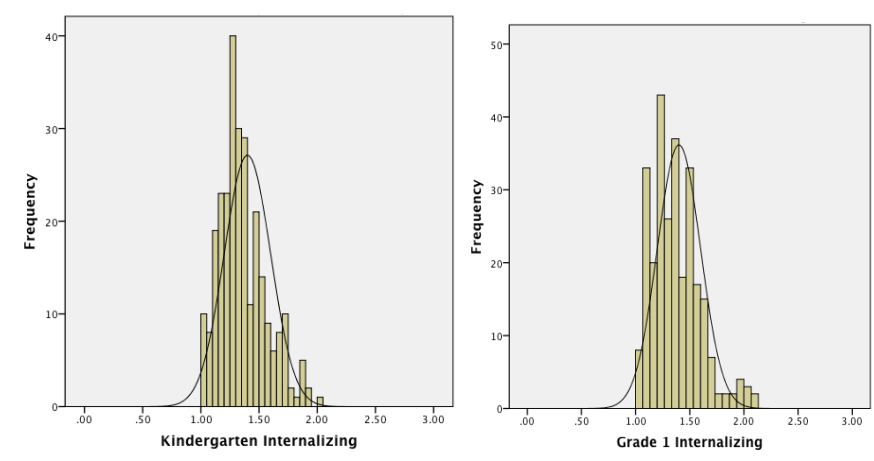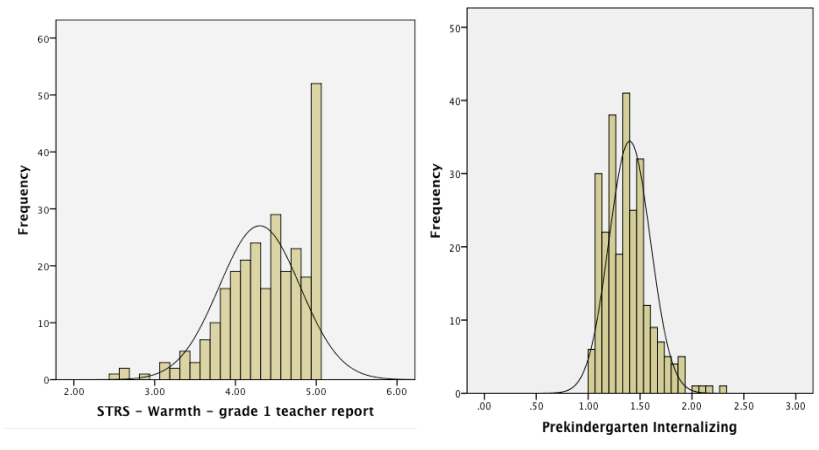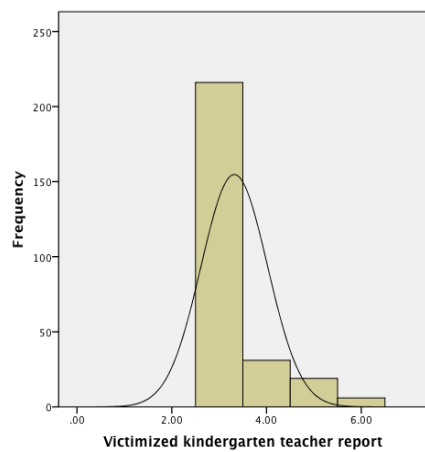
Appendix E

Scatterplot of regression residuals

Appendix F

Normal probability plot of regression for outcome variable of internalizing behaviours

Appendix G

Correlations between pre-kindergarten and kindergarten measurements

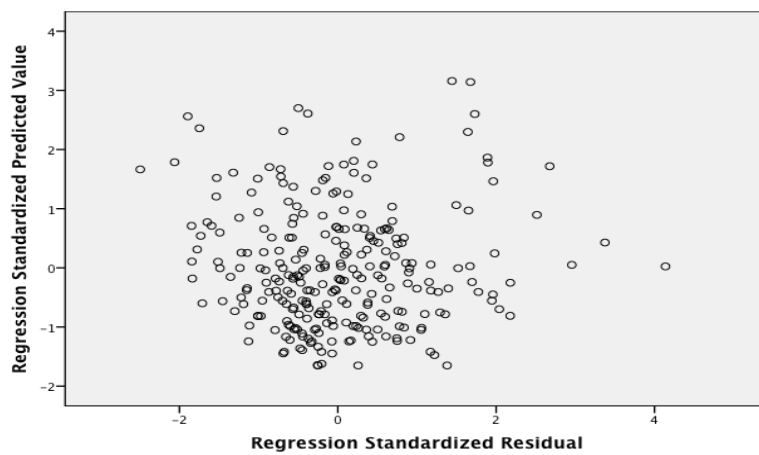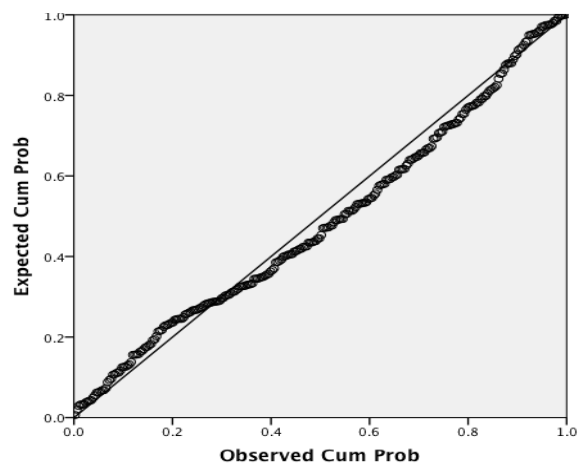|		1	2	3	4	5	6	7	8	9	10
1	Pre-K Int.	-									
2	K Int.	.64**	-								
3	Pre-K warmth	-.05	.01	-							
4	K warmth	-.09	.03	.22**	-						
5	Pre-K conflict	.02	-.01	-.47**	-.10	-					
6	K conflict	.03	-.04	-.22**	-.37**	.47**	-				
7	Pre-K Vict. (t)	-.06	-.07	-.10	-.10	.27**	.26**	-			
8	K Vict. (t)	-.05	-.05	-.02	-.02	.07	.28**	-.07	-		
9	Pre-K Vict. (p)	.13*	.16*	.07	.01	.11	.12	.13**	.23**	-	
10	K Vict. (p)	.12	.29**	-.01	-.03	.20**	.16**	.20**	.08	.44**	-

Note: $p < .05, p < .01**, N = 258$.*

Correlations between kindergarten and grade one measurement

		1	2	3	4	5	6	7	8	9	10
1	K Int.	-									
2	G1 Int.	.66**	-								
3	K warmth	.03	-.02	-							
4	G1 warmth	-.11	-.19**	.18**	-						
5	K conflict	-.04	.09	-.37**	-.09	-					
6	G1 conflict	-.01	.04	-.12**	-.32**	.29**	-				
7	K Vict. (t)	-.05	-.02	-.02	.01	.28**	.07	-			
8	G1 Vict. (t)	.01	.02	-.12	-.22**	.24	.35**	.13**	-		
9	K Vict. (p)	.29**	.22**	-.02	.01	.16**	.17**	.08	.05	-	
10	G1 Vict. (p)	.16*	.35**	.01	-.17**	.20**	.20**	.10	.04	.40**	-

Note: $p < .05, p < .01**, N = 258$.*