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SYMPTÔMES D'ANXIÉTÉ CHEZ LES ÉLÈVES DE MATERNELLE PERTURBATEURS: EXAMEN DES FACTEURS ASSOCIÉS ET DE LEUR EFFET MODÉRATEUR SUR UNE INTERVENTION

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RÉSUMÉ

Les études démontrent une concomitance assez élevée entre les comportements perturbateurs et les symptômes d'anxiété chez les enfants (Cunningham & Ollendick, 2010). Ces données doivent être prises en compte dans les études portant sur l'efficacité des programmes de prévention visant la réduction des comportements perturbateurs. Les études qui s'intéressent à l'évaluation de ces programmes démontrent qu'ils sont partiellement efficaces. L'une des raisons évoquées pour expliquer ces résultats pourrait être liée aux caractéristiques personnelles et familiales des enfants perturbateurs qui présentent également des symptômes d'anxiété. Cette étude propose : 1) d'évaluer les liens entre les symptômes d'anxiété et les caractéristiques personnelles et familiales des enfants de maternelle qui manifestent des comportements perturbateurs, et 2) d'évaluer si la présence de symptômes d'anxiété chez les élèves perturbateurs modère l'efficacité d'un programme de prévention. Les résultats indiquent que les caractéristiques propres à l'enfant, qui ont trait à l'impulsivité et la timidité/retrait ainsi que les caractéristiques familiales liées à l'hostilité parentale et les conflits conjugaux sont liées à la manifestation de symptômes d'anxiété chez les enfants perturbateurs. De plus, les résultats démontrent que l'anxiété modère l'effet du programme de prévention évalué. Ainsi, les enfants perturbateurs qui ont plus de symptômes anxieux sont plus habiles socialement après avoir été exposés à deux conditions expérimentales du programme comparativement aux enfants de la condition contrôle. La présence d'anxiété chez les enfants perturbateurs favoriserait la réponse positive à l'intervention.

MOTS-CLÉS : anxiété, comportements perturbateurs, enfants, programme de prévention.

INTRODUCTION

It has repeatedly been found that disruptive behaviours in childhood are a risk factor for later adjustment problems such as conduct disorders, violence and delinquency, and may also lead to school dropout and adult criminality (Loeber, Burke, Lahey, Winters & Zera, 2000; Vitaro, Brendgen & Tremblay, 2002; Vitaro, Gendreau, Tremblay & Oligny, 1998). The need for an early detection and intervention is thus crucial to aid preschoolers who seem to be on precarious trajectories by revealing disruptive behaviours.

Disruptive behaviours are characterized by hyperactivity, aggression, opposition and inattention, and can be displayed indirectly or directly, verbally or physically (Poulin, Capuano, Vitaro, Verlaan, Brodeur & Giroux, 2013; Vitaro, Brendgen & Tremblay, 1999). Prevalence rates of kindergarteners in Québec that display disruptive behaviours appear to range between 9-15% (Conseil Supérieur de l'Éducation, 2001). Moreover, it has been found that children with disruptive behaviours tend to struggle academically from the beginning of their schooling (Campbell, Spieker, Burchinal & Poe, 2006; Hinshaw, 1992). This seems to be explained by the fact that they often enter school without the necessary academic prerequisites, and so, joint with the disruptive classroom behaviour, would contribute to their academic struggles (Vitaro, Brendgen & Tremblay, 2013). This deficit, along with their disruptive behaviours, translates into a high risk of school dropout amongst other problems such as later violence, delinquency, conduct disorder, poor emotion regulation and relational difficulties (Reid, Webster-Stratton & Baydar, 2004; Vitaro, Brendgen, Larose & Tremblay, 2005). Nevertheless, numerous studies have shown that disruptive behaviours can be treated if interventions are put in place early on, and promising results are even more probable when they are implemented before the age of 8, when

behaviours are thought to crystalize (Beauchaine, Webster-Stratton & Reid, 2005; Webster-Stratton, Reid & Hammond, 2004).

The origin of disruptive behaviours is multifaceted and often results from an interaction between biological, social-cognitive and environmental factors throughout one's development (Dodge, Coie & Lynam, 2006). Due to their more flexible properties, prevention programs focus on changes that can be made within social-cognitive and environmental domains. As such, research has provided evidence for the effectiveness of parent training in the treatment of disruptive behaviours (Gardner, Burton & Klimes, 2006; Gross et al., 2003; Hartman, Stage & Webster-Stratton, 2003; Ollendick, Jarrett, Grills-Taquechel, Hovey & Wolff, 2008). In addition, child-focused interventions, especially those based on the development of social skills and problem solving, have also been rendered as an effective intervention to modify child behaviour (Webster-Stratton & Reid, 2010). Nevertheless, research has also indicated that programs aimed solely at a single aspect of a child's environment (whether it be parent training or child-focused interventions) are not nearly as effective in modifying disruptive behaviours as programs that undertake a multimodal approach; programs that incorporate the different sources of difficulty in order to provide treatment and support in all spheres (Beauchaine et al., 2005; Tremblay, Pagani-Kurtz, Mâsse, Vitaro & Pihl, 1995; Webster-Stratton & Reid, 2010). Hence, in order to reduce the adverse effects of risk factors and promote protective factors across the different settings, interventions are now multimodal and combine parent training, child-focused interventions, as well as teacher training (Reid, Webster-Stratton & Hammond, 2003; Webster-Stratton et al., 2004).

Despite the greater effectiveness of multimodal strategies, certain conditions may be more or less fitting for favourable outcomes. As such, disruptive children may not form a completely homogeneous group and hence may not respond the same way to

interventions. For instance, it has recently been stated that anxiety is one of the main underpinnings of disruptive behaviour in children, and that despite a great association between the two elements, there is a flagrant disregard for such symptomatology in developmental theories and intervention models (Granic, 2014). Anxiety, characterised as a basic emotion that arises in situations that are ambiguous and potentially threatening (Darwin, 1872), may hence be one of the principal reasons for a partial understanding of children's disruptive behaviour and potential limited intervention effects (Granic, 2014). In order to adjust, if needed, the content of future interventions and promote better intervention outcomes, it is essential to take into account the presence of anxiety symptoms and have a better understanding of why they are often present in children with disruptive behaviours. Hence, this research's first objective is to examine the family and child-specific characteristics related to the presence of anxiety symptoms in disruptive children, in hopes to better suit their needs.

A way to assess the conditions under which prevention interventions may be more efficient is by examining moderating variables. A moderating variable is an element that "influences the strength or direction of the relationship" between two variables (Ollendick et al., 2008, p. 1448). In prevention outcome research, moderators have the potential to explain who will benefit from the intervention, and under which conditions a specific effect may be found (MacKinnon & Luecken, 2008; Ollendick et al., 2008). Moderating variables may include a wide array of elements such as parental attributes, child characteristics, environmental factors or program implementation. Seeing as anxiety seems to be neglected in interventions regarding disruptive children (Granic, 2014), this research's second objective will focus on child anxiety symptoms as a moderating variable for the effectiveness of a multi-modal prevention program amongst children with high levels of disruptive behaviours.

CHAPTER I

CONCEPTUAL FRAMEWORK

1.1 Disruptive Behaviour in the Preschool Years

Disruptive behaviours are common during the preschool years, yet for most children, there is usually a marked reduction of such behaviours before school entry (Tremblay et al., 2004). However, for a number of children, disruptive behaviours persist and intensify. Children who show signs of disruptive behaviours at a very young age are termed "early-starters" (Moffitt, 1993) and often represent a trajectory of life-persistent antisocial behaviour and frequent affective disorders, which places them at greater risk for problems that persist well into adulthood (Conduct Problems Prevention Research Group [CPPRG], 2011; Laird, Jordan, Dodge, Pettit & Bates, 2001). Conversely, although late-starters show similar behaviour profiles during adolescence, the fact that the onset is later in their development improves their prognosis and so they often show disruptive behaviours that are limited to the adolescent period (Laird et al., 2001). Moreover, it has been found that the degree and intensity of early conduct problems at school entry greatly predicts the trajectories of children with disruptive behaviours (Lahey & Waldman, 2003). In fact, the higher their levels of disruptive behaviour at the time of their entrance into kindergarten, the more such children will show persistence and aggravation of problems over time (Brame, Nagin & Tremblay, 2001; Lahey & Waldman, 2003). In addition, Brame and his collegues (2001) found that early-starters with higher rates of behavioural problems at school entry reached higher intensities, as well as showed steeper slopes of malfunction than their counterparts. Taken together, compromised developments caused by the presence of disruptive behaviours highlight the importance of evaluating if other difficulties are present in order to better understand such children

and to prevent ravelling trajectories from occurring. A first step in achieving that is evaluating if a co-occurrence with other symptomatology is a reality for kindergarteners with disruptive behaviours.

1.2 Co-occurrence

Comorbidity is defined as the existence of two or more different disorders in the same individual at the same time (Cunningham & Ollendick, 2010). However, when assessing dimensional conditions such as different intensities of symptoms, one must speak of co-occurrence rather than comorbidity (Cunningham & Ollendick, 2010). With respect to child-specific characteristics like the co-occurrence of disruptive behaviour and anxiety symptoms, research suggests that the co-occurrence is frequently present and can differentially predict the impact of interventions across different groups (treatment and control) (Beauchaine et al., 2005; Cunningham & Ollendick, 2010; Granic, 2014). A study by Zoccolillo (1992) also illustrated this propensity by stating that anxiety is three to four times more frequent amongst children and adolescents who present conduct disorders than those who do not. In fact, research has found that the co-occurrence of anxiety and behavioural problems appears to be three times more likely than what can be expected by chance amongst community-based samples (Bubier & Drabick, 2009; Cunningham & Ollendick, 2010; Lahey & Waldman, 2003; Ollendick et al., 2008). It is also suggested that those numbers be an underestimate, given that adults are less likely to notice internalizing symptoms such as anxiety, and much more likely to observe the externalized, often aggressive and violent behaviours of children with disruptive behaviours (Granic, 2014).

Children who display disruptive behaviours and anxiety symptoms are thought to

have a different developmental trajectory than those who are purely disruptive, those who are purely anxious or those who are without difficulty. For instance, it has been found that before reaching puberty, children who display both a conduct disorder and anxiety, are generally better adapted and less aggressive than aggressive children that do not manifest anxiety symptoms (Dumas, 1999). Researchers have found that such children fight less often and have friendships that are more positive than aggressive children without symptoms of anxiety (Walker et al., 1991). In addition, the Montreal Longitudinal Study found that kindergarten boys who are aggressive and agitated but not anxious and not prosocial, were more at risk of displaying conduct problems throughout their schooling and engaging in delinquent behaviour than their counterparts who are equally aggressive and agitated but are anxious and/or prosocial (Kerr, Tremblay, Pagani-Kurtz & Vitaro, 1996). Similarly, Tremblay and colleagues (Tremblay, Phil, Vitaro & Dobkin, 1994, 1998) have found that 5-year-old boys presenting this co-occurrence had a less acute risk of displaying frequent and stable antisocial behaviours between 10 and 13 years of age, than those who displayed disruptive and impulsive behaviours but who were not anxious. Nevertheless, this apparently protective effect of anxiety seems to be restricted to the childhood years, as similar effects were not found beyond that period (Dumas, 1999). In addition, a study by Pulkkinen and Tremblay (1992) compared the pattern of boys' social adjustment by examining clusters of behaviours coined as aggressive (bullies, uncontrolled, and multiproblem) and non-aggressive (normal, anxious, passive, inattentive, nervous). The uncontrolled boys, those who were high in hyperactivity, anxiety, inattention and aggression, but with some degree of prosociality fared better than those in the other two aggressive groups (bullies: high on aggression, hyperactivity, but low on prosociality, anxiety and inattention, and multiproblem: boys high on all levels of problematic behaviours), but worse than those in the non-aggressive groups. Such results illustrate that children who display disruptive behaviours and also have anxiety symptoms have a better developmental trajectory than those who manifest disruptive behaviours alone, but also present worse

outcomes than children who are purely anxious or those who do not manifest problematic behaviours (Dumas, 1999; Pulkkinen & Tremblay, 1992).

1.3 Individual Characteristics Potentially Associated with Anxiety Symptoms in Children with Disruptive Behaviours

Seeing as child-specific characteristics have an important impact on the effectiveness of intervention programs, it is essential to examine the different factors associated with disruptive behaviours. In fact, it has recently been found that the majority of aggressive children present anxiety symptoms, but at varying degrees (Granic, 2014). What's more, Granic (2014) also stipulates that prolonged anxiety symptoms may lessen a child's ability to inhibit impulses and in turn increasingly dispose him/her to be disruptive, as a way of regulating his/her anxiety symptoms. In addition, prior research has shown that individual characteristics of children with disruptive behaviours such as anxiety, impulsivity, shyness or withdrawal and low prosociality are amongst the strongest predictors of internalizing and externalizing problems (Granic, 2014; Leve, Kim & Pears, 2005). In fact, interventions targeting such characteristics have found marked decreases in child internalizing and externalizing behaviours, thereby providing support for the importance of such variables in different studies (Forgatch, DeGarmo & Beldvas, 2005; Stoolmiller, Eddy & Reid, 2000). A study examining the contribution of child temperament and interactions with family environment on problematic behaviour has shown that contrary to normative developmental trajectories of externalizing behaviours (which are thought to decrease from age 4 to 18), high impulsivity at age 5 predicted greater age-17 externalizing behaviours (Bongers, Koot, Van der Ende & Verhulst, 2003; Leve et al., 2005). Clearly then, child-specific characteristics need to be assessed in order to better understand the presence of anxiety in children with disruptive behaviours.

1.4 Family Characteristics Potentially Associated with Anxiety Symptoms in Children with Disruptive Behaviours

Children are greatly influenced from their family structure and parental attributes, and this may in turn influence the co-occurrence between disruptive behaviours and anxiety symptoms. Amongst the wide array of characteristics, hostile parenting, maternal depression and low marital adjustment, are known to be important predictors of internalizing and externalizing problems in children (Granic, 2014; Leve et al., 2005). In the study by Leve and colleagues (2005), family environment (such as maternal depression, harsh discipline, marital adjustment and family income) was assessed with temperament-family interactions on child internalizing and externalizing behaviours. Results have shown, amongst other things, that maternal depression and child fear/shyness predicted internalizing behaviours across a 12-year time span for both males and females (Leve et al., 2005). Furthermore, the researchers found that age-5 harsh discipline predicted boys' age-17 externalizing behaviour, but only predicted girls' externalizing behaviour when it was accompanied by low fear/shyness or high impulsivity. In addition, Granic (2014) has found that unpredictable parenting may induce anxiety in children, which in turn may generate aggressive behaviours. If such an assertion is made with regards to a particular parenting style and its effect on child symptomatology, it is plausible to hypothesize that other family related characteristics, such as maternal depressive symptoms, parental hostility and couple adjustment, might have a significant role in the presence of anxiety symptoms in children with disruptive behaviours.

The assessment of the different child-specific and family characteristics of disruptive children is crucial in order to shine light on the co-occurrence between anxiety symptoms and disruptive behaviour. Subsequently, evaluating the moderating effect of anxiety symptoms on the impact of an prevention program targeting children with

descriptive behaviours is essential, given that the presence of such a co-occurrence may be one reason why programs aiming to decrease disruptive behaviours remain only moderately effective.

1.5 The Preschool Period and the Importance of Intervening in this Period

The preschool years represent an important developmental context for growing children. As the transactional model posits, the development of a child rests on the continuous interactions between one's own characteristics and the external environment, notably the experience and stimulation provided by the family and social context (Sameroff & Fiese, 2000). Furthermore, the numerous interactions that children have with the environment may direct them towards different paths, some less appropriate than others. Despite the fact that change is indeed possible, there appears to be less flexibility for change when children have already travelled through several paths of the same nature (Sroufe, Carlson, Levy & Egeland, 1999). For instance, children who have encountered several maladaptive experiences, will have greater difficulties in switching to more adaptive ones even with intense interventions. In order to make alterations in behaviour more probable, it is imperative to intervene as early as possible.

The preschool years also represent the emergence of cognitive and social skills, such as the ability of children to understand emotions, to take another's perspective, as well as to help or share with others (Ladd, Herald & Kochel, 2006). Such cognitive changes lead to alterations in terms of social competence and socio-emotional skills which greatly impact the establishment of interactions with peers (Ladd et al., 2006). As such, the ability of children to express empathy, sympathy and other prosocial behaviours is associated with social acceptance in the peer group. Conversely, it has been found that kindergarteners using a higher frequency of aggressive behaviours

than prosocial behaviours are less appreciated by their peers, have fewer friends and are involved in more conflicts than their more prosocial counterparts (Ladd et al., 2006). In addition, children are malleable at this age and also learn a lot by observation and modeling (Ladd et al., 2006). Clearly then, the preschool years are crucial for the foundation of an adequate development and represents a sensitive period where the development process embodies opportunity and vulnerability. This also suggests an important time-frame where children are more receptive to learning opportunites such as intervention programs. Consequently, exposing disruptive children to stimulating practices and programs aimed to alter their behavioural trajectories in kindergarden can greatly help them get back on a positive path.

1.6 Multimodal Prevention Programs

Several prevention programs have been implemented, notably in kindergarten, to target children with high levels of disruptive behaviours. As mentioned earlier, programs that are recognized as being the most effective and uphold greater treatment effects are those that use a multimodal approach including parent training, child-focused interventions, and teacher training (Beauchaine et al., 2005; Reid et al., 2003). Recent interventions integrate targeted as well as universal intervention strategies and also address multiple risk factors in a cohesive program.

Prevention programs in Québec such as the Montreal Experimental Longitudinal Study (Tremblay, Vitaro, Nagin, Pagani, & Séguin, 2003) and L'Allié (Desbiens, Bowen, Pascal & Janosz, 2009), and American programs such as The Incredible Years (Webster-Stratton & Reid, 2010) and Fast-Track (CPPRG, 2011) have incorporated multimodal principles and have succeeded in reducing child aggression and other risk factors associated with disruptive behaviours by promoting social skills and problem solving abilities, as well as by implementing effective parenting

practices. Nevertheless, despite the numerous programs that have been tested amongst children with disruptive behaviours, approximately one third of children display resistance to interventions and still manifest troublesome behaviours (Ollendick et al., 2008). Many hypotheses are made regarding the elements that may lead to poor outcomes, with a focus on potential moderating variables.

1.7 Role of a Moderating Variable in Interventions for Disruptive Youth

In order to understand why some children who participate in prevention programs do not seem to benefit from the interventions, a focus on potential moderating variables is fundamental. Such moderating variables may encompass family specific characteristics (e.g., maternal depression, parental hostility), and child characteristics (e.g., initial level of problematic behaviour, impulsivity) (Beauchaine et al., 2005). These variables are present before the intervention and have the potential to modify treatment response. For instance, a study by Beauchaine and colleagues (2005) combined data from six randomized clinical trials and 514 children with oppositional defiant disorder and/or conduct disorder (3 to 8.5 years old), to evaluate moderators, mediators, and predictors of intervention outcomes. The researchers assessed several family and child-specific moderators and documented that marital adjustment, maternal depression, paternal substance abuse, and child comorbid anxiety/depression each moderated treatment response. An overview of the literature regarding child-specific characteristics allows us to see that anxiety is often present in the equation and may be the reason why current interventions are only moderately effective (Granic, 2014). Nevertheless, anxiety as a moderator is less studied than depression or anxiety-depression, despite the fact that this problem seems to occur just as often with children presenting disruptive behaviours than depression or anxiety-depression (Costello, Egger, Copeland, Erkanli & Angold, 2011; Dumas, 1999; Granic, 2014). Though numerous studies have evaluated the adverse outcomes of disruptive

behaviours on the development of a child and the need to intervene as soon as possible, no studies to date have assessed anxiety alone as a moderating variable for the impact of preventive interventions amongst children with high levels of disruptive behaviour. Anxiety as a moderator has however been studied in combination with other internalizing problems such as depression. For instance, in the study by Beauchaine and colleagues (2005), the researchers documented better treatment outcomes, as reported by mothers, for children with comorbid anxiety/depression and conduct disorder, than those with conduct disorder alone (Beauchaine et al., 2005). If such results were found with respect to anxiety/depression, anxiety alone has the potential of being a moderating variable regarding the impact of intervention programs. The results of the study illustrate the important role a moderating variable may have in prevention programs amongst youth with disruptive behaviour, but still needs to be replicated amongst children who do not necessarily meet the diagnostic criteria for conduct disorder and who present solely symptoms of anxiety rather than being considered anxious/depressed based on a clinical cut-off. In order to achieve this, we propose to evaluate anxiety symptoms as a moderator amongst children who display disruptive behaviours and who were exposed to the Fluppy program in kindergarten.

1.8 The Fluppy Prevention Program

Fluppy is a program assigned to kindergarteners with high levels of disruptive behaviours. It was created in 1990 following the experimental work of Tremblay and colleagues (1995). Since its conception, the Fluppy program is widely disseminated across Quebec (Capuano, Poulin, Vitaro, Verlaan & Vinet, 2010). In hopes to attain a greater effectiveness in all domains of a child's life (augment the protective factors and reduce the risk factors), it includes a multimodal intervention that is implemented amongst children, parents and teachers (Capuano et al., 2010). Five components are

offered in the Fluppy program, some being universal (social skills and problem-solving training, as well as an academic component) and others selective (teacher training, parent training, and peer component) (Poulin et al., 2013). The social skills and problem-solving training is considered universal since it targets the entire classroom of a child found to display high levels of disruptive behaviours. This intervention aims to foster social skills, problem solving and self-control abilities, and takes place within the classroom with the help of the teacher and a professional. This component is divided into 15 sessions, each focusing on learning a particular social skill, some of which include how to make contact, sharing and cooperating (Capuano et al., 2010; Poulin et al., 2013). Likewise, the academic component is intended for all students of a kindergarten class with a targeted child. It comprises of two components, that of French and mathematics. The French component entitled "La forêt de l'alphabet" uses group activities to interactively teach the alphabet, thereby aiming to prevent early difficulties in reading and writing (Brodeur, Gosselin, Mercier, Legault, & Vanier, 2006). The mathematics component follows the same line of thought but with numbers, geometry and measurements (Giroux & St. Marie, 2002).

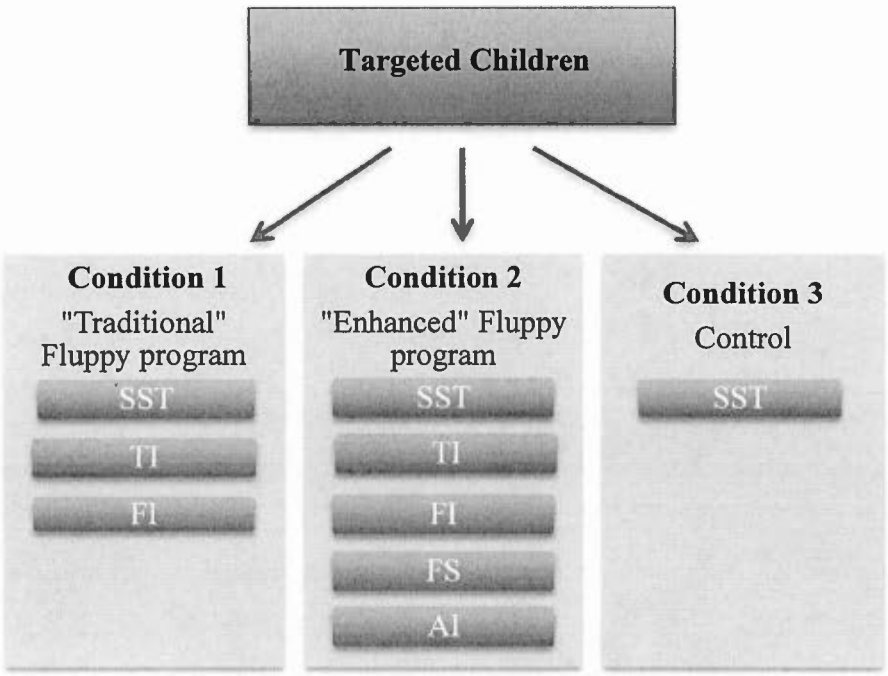
The selective components are aimed at children with high levels of disruptive behaviours. They involve an intervention plan with the teacher, home visits to guide parental assistance, as well as support for positive friendship development. For instance, the teacher component involves the help of a trained therapist who supports and assists teachers in communicating the prosocial and problem solving skills, and helps create a classroom environment that promotes learning opportunities and positive interactions with peers (Capuano et al., 2012). The trained therapist also helps the teachers get a better understanding of the problems associated with the targeted children in their class. The parent component includes family meetings that take place at home, led by a trained therapist. The therapist observes and takes note of

the interactions between the parents and the child. Following each session, parents receive feedback regarding the needs of their child and the particular contexts in which the problematic behaviours occur (Capuano et al., 2012). The family component holds three objectives: to diminish the stress reported by the parents, support the development of parental skills with regards to managing their child's disruptive behaviour, as well as reinforce the parent-child relationship. Finally, the peer component aims to endorse friendship ties by matching the disruptive child with a socially competent classmate for sessions that are supervised by the trained therapist. A thorough description of each component is explained further (see methodology).

An evaluation of the Fluppy program amongst targeted children with high levels of disruptive behaviours has been underway (Poulin et al., 2010). Two versions of the program are tested. The first version corresponds to the "traditional" version of Fluppy disseminated across Québec since 1990 and includes a universal component (social skills and problem-solving training) and two selective components (teacher support, and family intervention). The second version, coined the "enhanced" version of the program, includes the same three components previously mentioned, with two additional components, notably the friendship skills and the academic component. The supplementary components were added to strengthen the impact of the Fluppy program based upon recent research on school readiness and the role of peers in children's lives (Boivin, Vitaro, & Poulin, 2005; Ladd & Dinella, 2009). The two versions are compared to a control condition, a comparison group where children solely received the universal social skills and problem-solving training and no selective intervention. Children are allotted to the different conditions by random assignment. The research design is illustrated in Figure 1.1.

Figure 1.1

Research design for the effectiveness study of the Fluppy program.



Note. SST, social skills training (universal); TI, teacher intervention; FI, Family intervention; FS, friendship skills; AI, academic intervention.

Findings indicate that children who participated in all five components generally performed better after one year of intervention (at the end of kindergarten) than the children in the control condition with regards to academic skills (better knowledge of the names and sounds of letters for both girls and boys) (Poulin et al., 2013). A condition by child's gender interaction was found for social skills as rated by teachers, such that aggressive girls in both the traditional and enhanced conditions displayed an increase in social skills at the end of kindergarten compared to girls in the control condition. According to parents, an increase in social skills was found for aggressive girls as well as boys. A decrease of externalizing behaviours for girls was also found for the same two conditions, as rated by parents and teachers. On the

whole, aggressive girls seem to have benefited the most from the interventions provided (Poulin et al., 2013).

The present study is part of this larger program evaluation and will examine the presence of anxiety symptoms in children with disruptive behaviours. Two research objectives are examined in this research. The first objective will be to evaluate the relationship between symptoms of anxiety and various child-specific and family characteristics amongst children with high levels of disruptive behaviour. This question is of particular importance, as an understanding of the child-specific and family characteristics that are associated with anxiety symptoms in disruptive children will inevitably be helpful for future intervention purposes. The second objective will be to examine anxiety symptoms as a moderating factor for the effectiveness of a prevention program amongst children with high levels of disruptive behaviour. This will allow us to determine if being anxious is associated with better intervention effects, thereby revealing if anxiety served as a facilitator or an impediment for better intervention effectiveness.

CHAPTER II

OBJECTIVES AND HYPOTHESES

2.1 First Objective

To examine the contribution of child-specific and family characteristics to symptoms of anxiety amongst kindergarten children with high levels of disruptive behaviour

Many studies have showed that anxiety symptoms are often present in children with disruptive behaviours (Granic, 2014). However, the level of these symptoms can vary significantly from one disruptive child to another and the factors that can account for these variations are less known. Child-specific characteristics such as impulsivity, shyness/withdrawal and social skills, and family characteristics such as parental hostility, maternal depression and couple adjustment are significant predictors of internalizing and externalizing problems (Granic, 2014; Leve et al., 2005; Mesman & Koot, 2000). Hence, the present research will attempt to examine the contribution of these child-specific and family characteristics to symptoms of anxiety amongst kindergarten children with high levels of disruptive behaviour. It is also of keen interest to examine the unique contributions of each variable when considered simultaneously, in order to elucidate whether it is a combination of characteristics that is associated with a greater variance in anxiety symptomatology, or if some characteristics are more strongly associated with anxiety symptoms in disruptive children.

2.1.1 Hypotheses

Based on the studies above (Beauchaine et al., 2005; Leve et al., 2005), the following

hypotheses were made with respect to the contribution of child-specific and family characteristics to symptoms of anxiety in disruptive children:

1) Symptoms of anxiety will be positively associated with shyness/withdrawal, but will be negatively related to impulsivity and social skills.
2) Symptoms of anxiety will be negatively associated with couple adjustment and positively associated with maternal depression and parental hostility.

2.2 Second Objective

To examine if the presence of anxiety symptoms will moderate the effectiveness of a multi-modal prevention program amongst disruptive children

The second research question aims to uncover the moderating effect of anxiety symptoms on the effectiveness of a prevention program amongst children with high levels of disruptive behaviours. In order to evaluate the effects of the intervention, two outcome variables will be investigated: social skills and externalized behaviour. Seeing as Fluppy is a program that aims to reduce children's disruptive behaviours by teaching and promoting social skills, it seems suitable to evaluate the effectiveness of the intervention by a change in parent and teacher ratings of child social skills and externalized behaviours. These variables were measured before and after the interventions. In order to achieve this, an experimental design with random assignment to three conditions is used: 1) the traditional 3-component Fluppy program, 2) the enhanced 5-component program, and 3) a control condition where children received solely the universal social skills and problem solving training (see Poulin et al., 2013). Evaluating the moderating effect that anxiety symptoms have amongst kindergarteners who took part in the Fluppy intervention will help predict beforehand who may and may not benefit from the prevention interventions and help researchers refine their programs when dealing with children who are thought to have

a poorer prognosis with regards to treatment outcome.

2.2.1 Hypothesis

Based on the literature with respect to anxiety amongst children with disruptive behaviours (Beauchaine et al., 2005; Granic, 2014), the following hypothesis was made concerning the impact of prevention interventions:

1) Anxiety is expected to moderate the impact of the two versions of the Fluppy program (traditional and enhanced). Specifically, among the disruptive children who were exposed to any of the two versions of the program, children with higher levels of anxiety symptoms will benefit to a greater extent to the program (i.e., increase in social skills and decrease in externalized behaviours) compared to disruptive children exposed to the control condition.

CHAPTER III

METHODOLOGY

3.1 Participants

Our sample included 320 children with high levels of disruptive behaviour (see screening procedure below), (100 girls and 220 boys) with a mean age of 64.98 months (SD = 3.73). All children were enrolled in kindergarten classes of over 40 schools throughout the school board of Laval, a city of approximately 500 000 inhabitants within the province of Québec. The majority of the sample was constituted of children from middle-class families (average family income of $51,200) and living with both their biological parents (71%). On average, 20% of mothers had received welfare. Mothers had completed an average of 14.63 years of schooling (SD = 4.10) and fathers 15.05 (SD = 3.68). Ninety-five percent of the children in our sample were born in Canada and 94% had French as a mother tongue.

3.2 Screening Procedure

Participants were recruited over the course of three consecutive years (three cohorts) in 2002, 2003 and 2004, and were targeted by the following steps and criteria. At the beginning of October, parents and teachers completed a screening questionnaire of 18 items regarding disruptive behaviours; symptoms associated with oppositional problems, conduct problems, hyperactivity and attention deficits, and direct or indirect aggression (American Psychiatric Association [APA], 1994, Björkqvist, Lagerspetz, & Kaukiainen, 1992). Parents and teachers responded with respect to the following frequency scale: 0 = never, 1 = sometimes, 2 = very often. The total score

of the instrument varies between 0 and 36 and has a very good internal consistency with a Cronbach's alpha of .83 for the parent version and .93 for the teacher version. The correlation between both the parent and the teacher evaluation is .37 ($p < .01$). The majority of parents accepted to participate in this screening process (90%). Children who obtained a score above the 65th percentile both at home (according to parent ratings) and at school (according to teacher ratings) were identified as displaying high levels of disruptive behaviours (approximately 15% of the sample). The use of this double screening procedure is recommended by researchers in prevention research as it helps identify children who are most likely to have severe disruptive problems in the future (Dwyer, Nicholson & Battistutta, 2006; Lochman, 1995). Throughout the recruitment period, 3774 kindergarten children were screened for disruptive behaviours.

3.3 Research Design and Procedure

For the purpose of the first research question, all 320 disruptive children will be used. With regards to the second research question, a subsample of 202 disruptive children will be used (the remaining participants, n =118, were assigned to two other conditions that were not included in the present essay). The complete experimental design implemented for the evaluation of the Fluppy program included five experimental conditions (see Poulin & al., 2010), but only three will be included in the current analyses: 1) children exposed to the traditional three-component program (n = 66), 2) the enhanced five-component program (n = 72), and 3) the control group, where disruptive children were only exposed to a single universal component (n = 64). Randomization to the different conditions was achieved by pulling names out of a hat, a procedure supervised by one of the Fluppy program's creators.

3.4 Assessment Procedure

Trained research assistants administered all instruments in the fall during the month of October (pre-test) and again in May (post-test). Such evaluations included questionnaires completed by parents and teachers. Questionnaires were sent out and also picked up in schools by research assistants. Teachers sent questionnaires to parents who had to return them in a sealed envelope. Parents and teachers received gift certificates to thank them for their participation in the project. All procedures related to the evaluation of participants to assess the impact of the Fluppy program were submitted to the Institutional Ethics Committee for Research Involving Humans at UQAM. The committee issued a certificate of ethics, which respects the normative framework for the ethics of research involving human beings (see Appendix A).

Teachers and professionals who assured the interventions were trained and supervised by the Centre de Psycho-Éducation du Québec (CPEQ). With regards to the social skills and problem-solving intervention, a 2-day training session was introduced. Concerning the academic intervention, teachers received a 4-day training session, along with at least four group supervision sessions throughout the year. The professionals responsible for the family intervention came from four health and service centers (CSSS) and received two days of training and ongoing supervision. All interventions were carried out between November and April.

A common challenge for research programs is to move from efficacy trials to effectiveness trials throughout the dissemination process (Poulin et al., 2013). Despite the fact that efficacy trials recommend a particular format, dissemination often bestows a different, less intense reality. Hence, similar to other prevention programs, although all components were in fact applied, the intensity of their application was significantly reduced compared to what was initially advocated by the program

designers. It is thus deemed important to assess the effects that the Fluppy program can uphold as it is currently implemented in the field; with the constraints that limited resources generate. Keeping track of checklists completed by teachers and professionals after each intervention assessed adherence and fidelity to treatment. A description of each intervention component follows.

3.4.1 Social Skills and Problem-Solving Training

The social skills and problem-solving training intervention originally included 15 sessions aiming to foster social skills, problem-solving abilities and emotional management. The sessions were lead by the use of puppets and focused mainly on the skills outlined in the social-skills training program used in the study conducted by Tremblay and his colleagues (Bertrand, 1988). Once the teacher taught these skills, they provided positive reinforcement for all children who applied the skills in realistic interactions and situations of disagreement around the classroom. Such reinforcement was performed in hopes to allow children to generalize their newly acquired skills to different contexts.

3.4.2 Teacher Intervention

The teachers received support by the professionals assigned to their classroom in order to conduct the intervention sessions. The support was chiefly intended for teaching social and problem-solving skills, using natural classroom conditions to promote learning opportunities, and developing strategies for students who had difficulties creating positive interactions with their classmates. Teachers also learned, among other things, to use the Preschool Socioaffective Profile (PSP; LaFrenière, Dubeau, Janosz & Capuano, 1990) to gather information on the child and plan an intervention that is adapted to his or her needs, all while constructing a behaviour

profile that takes into account both the child's skills and areas of difficulties. The PSP can also help determine the socioaffective goals that the child should be able to meet by the end of kindergarten.

3.4.3 Family Intervention

Based on the social learning approach and the attachment theory (Bertrand, 1988; LaFrenière & Capuano, 1997; Speltz, 1990), the family intervention was precisely designed to decrease the level of self-reported parental stress, alter parental practices associated with the children's disruptive behaviours, reinforce parental practices related to the child's positive behaviours, encourage the development of positive parent-child relationships, and promote the creation of positive links between the families and the school. Although the initial activities are the same for each family, the specific goals pursued throughout those activities are adapted to each family's individual needs. The family intervention contained 20 structured sessions in the child's home, each lasting approximately 90 minutes and were led by the same therapist who also provided both previous intervention components.

3.4.4 Friendship Skills

This component aimed to create a context that promotes the development of positive and lasting friendships between at-risk students and their socially competent peers. The targeted child is paired every two weeks with a classmate for 10 play sessions or art activities of 30 minutes, under the supervision of a professional (content inspired by Bierman's Peer Pairing, 1992).

3.4.5 Academic Intervention

This component included two interventions, that of French and math. The French intervention provided teacher training and support for the execution of a systematic program aiming the education of speech sounds (phonetics). The program entitled "La Forêt de l'alphabet" (based on the work of Brodeur et al., 2006, as well as Kame'enui et al ., 2002), included a thorough procedure for teaching the names and sounds of letters, as well as the implementation of games using the letters for the development of skills that promote the mental manipulation and organization of speech sounds. For each of the 26 letters of the alphabet, four blocks of enrichment activities (each 15 minutes long) are offered. Teachers incorporate these explicit and systematic activities on the alphabetic principle, phonemic awareness and vocabulary in their regular approach to stimulate the emergence of writing abilities. They animate the group activities by ensuring the learning climate is stimulating, safe and fun, all while using pedagogical equipment specially designed for this purpose.

The math intervention comprised of two main notions: numbers and geometry, each organized with regards to mathematical problem solving contexts. Activities involving sequences and scenarios were used for each of the themes and problem-solving situations. For each scenario, students needed to solve a problem that was either digital (ex. counting) or geometric (ex. arrangement of geometric shapes). The constraints of the situation were changed from one scenario to another in order to improve the strategies used by children and to promote learning (Brousseau, 1998). The activities aimed reinvestment and consolidation of mathematical knowledge through workshops involving typical scenarios encountered in kindergarten classes (card games, trails) as well as interactions between students. The full program contained 78 lessons, each about 30 minutes long (Giroux & St. Marie, 2002).

3.5 The Implementation of the Fluppy Program

As it was stated earlier, in-field implementation often translates into a different intensity than it was originally planned from the researchers. It was indeed the case for the Fluppy project as well, in different strengths throughout the different components. Firstly, with regards to the social skills and problem-solving training component, the school board of Laval had chosen to regroup/condense certain topics and hence shorten the program from 15 to 9 sessions. That being said, teacher and therapist ratings indicated that kindergarten children were exposed to an average of 8.74 sessions out of the nine planned sessions. This of course is extremely close to what had been planned and so it can be said that the social skills component was implemented very satisfactorily. Exposure to the family component seems to have been somewhat variable. Due to resource constraints, a maximum of six sessions were to be conducted out of the 20 planned sessions. Nevertheless, implementation findings suggest that an average of 4.40 home visits were made out of the six planned visits, and 10% of the families did not participate (or participated limitedly) in the interventions. Conversely, the friendship skills component turned out to be executed quite closely to the original plan. Children participated in an average of 9.16 sessions (out of the 10 planned sessions), and only 2% of children did not participate in any sessions. With regards to the academic component, resistance from the kindergarten teachers lead to a reduction in the intensity of the program and an adherence to one third of the content (approximately 26 of the 78 planned sessions). Findings suggest that close to one-third of children were exposed to nearly the entire, reduced version of the program, and almost all other children benefited from at least half of the Fluppy program since teachers only taught part of the program content. Seeing as the current evaluation of the Fluppy program uses an "intent-to-treat" design, all participants who were initially recruited were included in our analyses, regardless of the quantity of the interventions received.

3.6 Instruments

3.6.1 Anxiety symptoms

Parent ratings of children's anxiety symptoms were collected in October using a subscale of the Social Behaviour Questionnaire, an instrument developed for the Longitudinal Study of Child Development in Québec (Institut de la statistique du Québec, 2001), by combining items from different validated instruments (Achenbach, 1991; Boyle et al., 1993; Tremblay, Desmarais-Gervais, Gagnon & Charlebois, 1987; see Appendix B). The anxiety subscale contains seven items: "clung to adults or was too dependent", "jumped for nothing", "was concerned about the loss or the fact that something could happen to a parent", "has been too fearful or anxious", "cried a lot", "was worried" and "was nervous or tense". Parents (mostly mothers) were asked to rate on a 6-point Likert scale ("1" being "never or not at all true" and "6" being "often or very true"), their level of agreement or disagreement with regards to the child's behaviour in the past month for each given item. Internal consistency for the anxiety symptoms subscale was good, with a Cronbach's alpha of .82, a coefficient comparable to those reported in other studies (Broidy et al., 2003; Duchesne, Vitaro, Larose & Tremblay, 2008; Nagin & Tremblay, 1999; Pingault, Côté, Galéra, Genolini, Falissard, Vitaro, & Tremblay, 2012; Tremblay, Duchesne, Vitaro & Tremblay, 2013). The anxiety symptom score was obtained by calculating the mean across the seven items.

3.6.2 Instruments for the first objective

All data utilized for the first objective was collected in the fall of kindergarten (October).

3.6.2.1 Child Characteristics

Impulsivity. In order to create the impulsivity scale, items rated by parents assessing hyperactivity and inattention were combined. Prior research on children's hyperactivity/impulsivity and inattention symptoms relied on the early childhood behaviour scale from the Canadian National Longitudinal Study of Children and Youth (Statistics Canada, 2009), a measure incorporating items from the Child Behaviour Checklist (Achenbach, 1991), the Ontario Child Health Study Scales (Boyle et al., 1993) and the Preschool Behaviour Questionnaire (Tremblay et al., 1987), all showing good validity in early childhood and in predicting attention deficit hyperactivity disorder (Romano, Tremblay, Farhat, & Côté, 2006). Based on studies showing that participants with elevated hyperactivity/impulsivity symptoms had a high probability of also displaying high levels of inattention (and vice versa; Galéra et al., 2011), the elaboration of the impulsivity scale incorporating hyperactivity and inattention was conducted. The impulsivity scale for the present study therefore includes 13 items (nine pertaining to the hyperactivity subscale and four concerning inattention), all answered on a 6-point Likert-type scale ("1" being "never or not at all true" and "6" being "often or very true"). Combining an average of all scores on the hyperactivity and inattention subscale created the impulsivity score. Internal consistency for the impulsivity scale was excellent, with a Cronbach's alpha of .96.

Social skills. Children's social skills were rated by parents with the use of The Gresham Social Skills Questionnaire (Gresham & Elliot, 1990). The short version of the questionnaire consists of 19 items, each measuring the frequency of certain social skills: cooperation (6), assertion (6), and self-control (7) with a three-point Likert scale (0= never; 1= sometimes; 2= very often). Teachers are asked whether the child complies with rules and directions (cooperation), initiates behaviours such as introducing oneself or asking others for information (assertion), or remains calm in

conflict situations with peers (self-control). Calculating the average of the responses for all 19 items created an overall score for social skills. Internal consistency for the social skills scale is excellent (alpha = .86).

Shyness/withdrawal. The social withdrawal subscale of the Social Behaviour Questionnaire was used to assess child shyness based on parent ratings. This subscale includes eight items, two being reversely scored due to the questions being phrased in a positive manner (see Appendix B). A 6-point Likert scale ("1" being "never or not at all true" and "6" being "often or very true") was also used to assess child shyness/ withdrawal. The final score was obtained by taking a mean of the ratings on all eight items. A high score on the variable would indicate the presence of shyness/withdrawal in disruptive children. The scale has good internal consistency, with a Cronbach's alpha of .82.

3.6.2.2 Family Characteristics

Maternal depressive symptoms. Mothers responded to a French version of the Center for Epidemiological Studies of Depression Scale (CES-D), a widely used 20-item self-report measure of depressive symptomatology (Radloff, 1977; see Appendix C). Mothers reported how they felt during the past week on a 4-point Likert scale ranging from 0 (rarely or none of the time) to 3 (most or all of the time). Scores were then summed across items. This measure has an excellent internal consistency with a Cronbach's alpha of .90.

Couple adjustment. In order to measure the overall quality of the couples, mothers completed the Dyadic Adjustment Scale (DAS; Spanier, 1976), a 32-item measure rated mostly on a 6-point Likert scale ranging from "always agree" to "always disagree", but also with other diverse response formats, developed to measure dyadic

adjustment (see Appendix D). The DAS measured Dyadic Satisfaction (10 items; the degree to which the couple is satisfied with their relationship), Dyadic Cohesion (5 items; the degree of closeness and shared activities experienced by the couple), Dyadic Consensus (13 items; the degree to which the couple agrees on subjects of importance to the relationship) and Affective Expression (4 items; the degree of demonstrations of affection and sexual relationships). The 32 items are summed to create a total score ranging from 0 to 151. High scores on the dyadic adjustment scale would indicate more positive dyadic adjustment and hence greater satisfaction with the relationship, as well as agreement amongst partners. Inversely, low scores would indicate conflict and disagreement within the couple. The internal consistency alpha was excellent with a Chronbach's alpha of .96.

Parental hostility. The parental hostility scale was composed of five items extracted from a questionnaire of 60 items regarding the four dimensions of parental rejection by the Interpersonal Acceptance-Rejection Theory (IPARTheory) by Ronher (Rohner, 1984; (see Appendix E). Mothers are asked to rate the following statements on a four-point scale from "almost always true" to "almost never true": You ridicule/make fun of your child; You are irritated by your child; You tell your child that he/she gets on your nerves; You humiliate your child in front of his/her friends when he/she makes mistakes; You find that other children are better than yours. The mean of all 5 scores was calculated to create the parental hostility subscale. The internal consistency alpha was fairly weak with a Chronbach's alpha of .60.

3.6.3 Instruments for the Second Objective

All instruments utilized for the second objective were administered before and after the interventions (October and May). Parent and teachers ratings for each variable were collected in order to aid in the reliability and validity of the results obtained, as

well as to document whether the effects are observed in both contexts or if they are specific to home or school settings.

Externalized behaviours. Parents and teachers rated the children's externalized behaviours over the previous month using 35 items from the Social Behavior Questionnaire, an instrument developed for the Longitudinal Study of Child Development in Québec (Institut de la statistique du Québec, 2001), by combining items from different validated instruments (Achenbach, 1991; Boyle et al., 1993; Tremblay et al., 1987). The response format used a Likert scale of six points ranging from 1 to 6 ("1" being "never or not at all true" and "6" being "often or very true"). For each child, scores of externalized behaviours were obtained by taking an average of the scores given for each item. A high score on this subscale indicates high levels of externalized behaviours. The instrument has an excellent internal consistency with a Cronbach's alpha of .97 for teachers and .94 for mothers.

Social Skills. Social skills were assessed with the same social skills measure as for the first objective, with the exception that parents as well as teachers rated children's social skills. Please refer to page 28 for a detailed description of the instrument.

CHAPITRE IV

DATA ANALYSIS

4.1 First Objective

The first objective aims to establish the relationship between anxiety symptoms, child-specific and family characteristics amongst kindergarteners with high levels of disruptive behaviour. To ensure that the data is normally distributed, methods to transform the data (logarithmic and square root transformations) were applied if necessary. The analysis was then conducted in two steps. Firstly, in order to determine such relationships, correlations between anxiety symptoms and each child-specific and family characteristics were computed. Secondly, using the significant variables from those correlations, a linear multiple regression analysis was conducted in order to see which independent variables still explained the variance of anxiety and which ones were lost once simultaneously entered in a regression. This allowed us to eliminate all redundant variables, those that do not provide unique variance when attempting to predict anxiety symptoms.

4.2 Second Objective

The second objective aims to uncover if the presence of anxiety symptoms will moderate the effectiveness of a multi-modal prevention program (Fluppy) amongst kindergarteners with high levels of disruptive behaviour. Multiple linear regression analyses were performed in order to assess the moderating effect of anxiety symptoms on the effectiveness of the program. As previously mentioned, this effect was assessed considering four outcomes: parent and teacher ratings of externalized behaviour and social skills. This method of analysis was chosen because it allowed us

to treat the moderator as a continuous variable, thereby evaluating if different levels of anxiety symptoms lead to different outcomes after the Fluppy intervention. In each of these regression analyzes, the dependent variable corresponds to a difference score calculated by subtracting the post-test from the observed score on the pre-test. Thus, four separate regression models were tested (difference scores on externalized behaviours and social skills according to parent and teacher ratings).

Descriptive analyses indicate that parent and teachers ratings of externalized behaviour and social skills were normally distributed. Before conducting the regression analyses, the moderating variable (anxiety) was standardized (Z-score). Also, two dummy variables were created in order to examine the contrast between the different experimental conditions the children were exposed to (one to contrast the traditional version against the enhanced and the control condition, and another to contrast the enhanced version with the traditional and the control condition). The control condition was used as a comparison group for the two dummy variables that were created.

The procedures for the regressions are described as follows. In the first step, anxiety was entered as the independent variable, along with the two dummy variables. In the second step, the interaction terms between anxiety and the first dummy variable, and anxiety and the second dummy variable were entered. Interaction terms are calculated by multiplying the two variables together. The same model is tested for the four outcome variables. Significant interaction effects were decomposed by observing the change in difference scores for each of the significant experimental conditions according to different values of the anxiety variable. For example, as anxiety symptoms increase, the outcome variable succeeding to the Fluppy intervention needs to be significantly different than their scores prior to the Fluppy intervention in order to conclude that a significant moderating effect was found. In other words, if children

with more anxiety symptoms have lower scores on externalized behaviours post intervention (after being exposed to either the traditional or the enhanced version of the program) than was the case beforehand, it would then be established that anxiety moderated the link between the Fluppy program and a reduction in externalized behaviours. The same will be done for the social skills variable. In order to examine the moderators and decompose the interactions for each significant effect, bivariate scatter plots will be produced using the difference score of the variables as rated by parents and teachers, the experimental condition and anxiety as the independent variable.

CHAPTER V

RESULTS

5.1 First Objective

5.1.1 Descriptive Analyses

Disruptive children had a mean anxiety score of 2.55 on a scale of 1 to 6, meaning they were on average in between the "never or not true at all" and "sometimes or somewhat true" on the response scale when asked about anxiety. With regards to the variability of the scores, the smallest value was 1 and the highest value was 5.71, with a variance of 0.61 and a standard deviation of 0.78. This suggests that children in our sample were only somewhat anxious according to parent ratings at the beginning of kindergarten. Although the skewness and kurtosis appear to be within the normal range, a square root transformation was applied in order to correct a slight asymmetry in the frequency distribution.

Child-specific characteristics were normally distributed and so needed no further modifications. Family characteristics on the other hand were not normally distributed so the scores of maternal depression and parental hostility underwent a logarithmic transformation. The values are reported in Table 5.1.

Table 5.1

Descriptive statistics of study variables (raw scores before undergoing transformations)

Variable	n	M (SD)	Skew	Kurt
Child-specific characteristics				
Anxiety	296	2.55 (0.78)	0.59	0.51
Impulsivity	296	3.36 (0.80)	0.32	0.19
Social skills	296	1.20 (0.23)	- 0.43	1.19
Shyness/withdrawal	296	2.47 (0.73)	0.49	-0.06
Family characteristics				
Maternal depression	264	6.78 (7.13)	1.80	3.65
Couple adjustment	204	2.98 (0.24)	-0.34	0.53
Parental hostility	294	1.50 (0.43)	1.65	4.23

Six bivariate correlations were computed in order to examine the relationship between anxiety, the three child-specific characteristics (impulsivity, social skills and shyness/withdrawal), and the three family characteristics (maternal depression, couple adjustment and parental hostility). The results are presented in Table 5.2. With regards to child-specific characteristics, impulsivity and shyness/withdrawal were significantly and positively associated with anxiety symptoms, whereas social skills were not. Regarding family characteristics, couple adjustment was significantly and negatively correlated with anxiety, and parental hostility was significantly and positively correlated with anxiety. Maternal depression did not render significant results with respect to its association with anxiety symptoms. All correlations between the other variables are relatively low (< .30).

Table 5.2

Correlations between anxiety, child-specific and family characteristics for disruptive children

Measure	1	2	3	4	5	6	7
1. Anxiety	-						
2. Impulsivity	**.401*** **	-					
3. Social skills	-.066	-0.245***	-				
4. Shyness/withdrawal	**.216*** **	.146**	-.196***	-			
5. Maternal depression	.097	.113	.020	-.001	-		
6. Couple adjustment	**-.158***	.055	.057	-.049	-.231***	-	
7. Parental hostility	**.187*** **	.195***	-.222***	-.024	.178***	.267***	-

Note. * $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$*

A linear multiple regression analysis was then conducted with the four variables that were significantly correlated with anxiety symptoms (impulsivity, shyness/withdrawal, couple adjustment and parental hostility) as independent variables, and anxiety symptoms as the dependent variable in the model. All variables were included simultaneously in the regression. The results are presented in Table 5.3. Results indicate that the regression model explains 23% of the variance in anxiety (R^2aj. = .228), F(4, 189) = 14.993, p <.001. Further examination revealed that the four variables significantly and uniquely contributed to the variance in anxiety symptoms; impulsivity (β= .37), shyness/withdrawal (β = .16), couple adjustment (β = -.18) and parental hostility (β = .14). Specifically, impulsivity, shyness/withdrawal, low couple adjustment and parental hostility were all associated with higher levels of anxiety symptoms, thereby confirming that both child-specific and family characteristics have an influence on anxiety symptoms amongst disruptive children.

Table 5.3

Regression analysis predicting anxiety symptoms from child-specific and family characteristics

Independent variables	*b*	*SE*	*B*
Impulsivity	0.06	0.01	**0.37*** **
Shyness/withdrawal	0.05	0.02	**0.16***
Couple adjustment	-0.20	0.07	**-0.18****
Parental hostility	0.09	0.04	**0.14***

Note. $R^2 = .23$; * $p \leq 05$, ** $p \leq 01$, *** $p \leq 001$

5.2 Second Objective

5.2.1 Descriptive Analyses

Parent and teacher ratings of social skills and externalized behaviours were normally distributed and did not need to undergo any transformations. Descriptive analyses for each variable are presented in Table 5.4. Raw scores refer to the pre and post measures of child social skills and externalized behaviours, as rated by parents and teachers, and according to the experimental conditions they were exposed to (traditional, enhanced or control). According to the different one-way ANOVAs conducted, no significant differences were found between the means at pre-test with respect to the different experimental conditions for all measures: parent externalized behaviours, $F(2, 181) = 1.941$, $p = 0.062$; teacher externalized behaviours, $F(2, 181) = 0.809$, $p = 0.489$; parent social skills, $F(2, 181) = 0.092$, $p = 0.397$; teacher social skills, $F(2, 181) = 0.282$, $p = 0.196$.

Table 5.4

Means and standard deviations of pre and post measures of externalized behaviour and social skills according to different versions of the Fluppy program

	Traditional				**Enhanced**				**Control**			
	Pre		Post		Pre		Post		Pre		Post	
	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD
Social skills (P)	1.17	0.23	1.25	0.25	1.20	0.20	1.25	0.25	1.22	0.25	1.21	0.30
Social skills (T)	1.10	0.25	1.20	0.27	0.99	0.30	1.16	0.32	1.03	0.31	1.06	0.35
Externalized behaviour (P)	2.91	0.60	2.59	0.64	2.78	0.61	2.55	0.55	2.72	0.63	2.65	0.72
Externalized behaviour (T)	2.80	0.60	2.67	0.61	2.98	0.80	2.80	0.90	2.96	0.81	2.86	0.81

Note. P= parent ratings; T= teacher ratings.

5.2.2 Main Effects of the Experimental Conditions

Interactions between the different experimental conditions and the dependent variables were examined. Results of the following regressions can be found in Table 5.5.

Examination of partial regression coefficients regarding social skills as rated by parents revealed a main effect for the traditional program $\beta = .21$, $p < .05$, but no main effect of the enhanced program. This suggests that according to parents, children who were exposed to the traditional Fluppy program had better social skills post intervention than children who were exposed to control condition. With regards to teacher ratings, social skills indicated a main effect of the enhanced version of the Fluppy program $\beta = .25$, $p < .01$. This indicates that teachers saw an increase in social skills post intervention for children who were exposed to the enhanced Fluppy program compared to children who were exposed to the control condition.

Similar effects were found with regards to parent ratings of externalized behaviour, as a main effect of the traditional program was also found $\beta = -.22$, $p < .05$. This suggests that according to parents, children who were exposed to the traditional Fluppy program presented fewer externalized behaviours post intervention as compared to children who were exposed to the control condition. No main effects of the experimental conditions were found according to teacher ratings.

Table 5.5

Effects of the experimental conditions for social skills and externalized behavior as rated by parents and teachers

Variable	Parent ratings			Teacher ratings		
	B	*SE*	*β*	*B*	*SE*	*β*
Social skills						
Traditional program	0.09	0.04	**0.21***	0.09	0.06	0.14
Enhanced program	0.07	0.04	0.17	0.16	0.06	**0.25****
Anxiety x Traditional	0.04	0.02	**0.22***	0.20	0.03	0.06
Anxiety x Enhanced	0.04	0.02	**0.19***	0.02	0.03	0.05
Externalized behaviour						
Traditional program	-0.29	0.11	**-0.22***	-0.03	0.13	-0.02
Enhanced program	-0.12	0.11	-0.10	-0.07	0.12	-0.05
Anxiety x Traditional	-0.04	0.06	-0.06	-0.01	0.07	-0.01
Anxiety x Enhanced	-0.08	0.05	-0.14	-0.04	0.06	-0.06

Note. $*p \leq .05$, $**p \leq .01$, $***p \leq .001$

5.2.3 Moderating Effect of Anxiety Symptoms

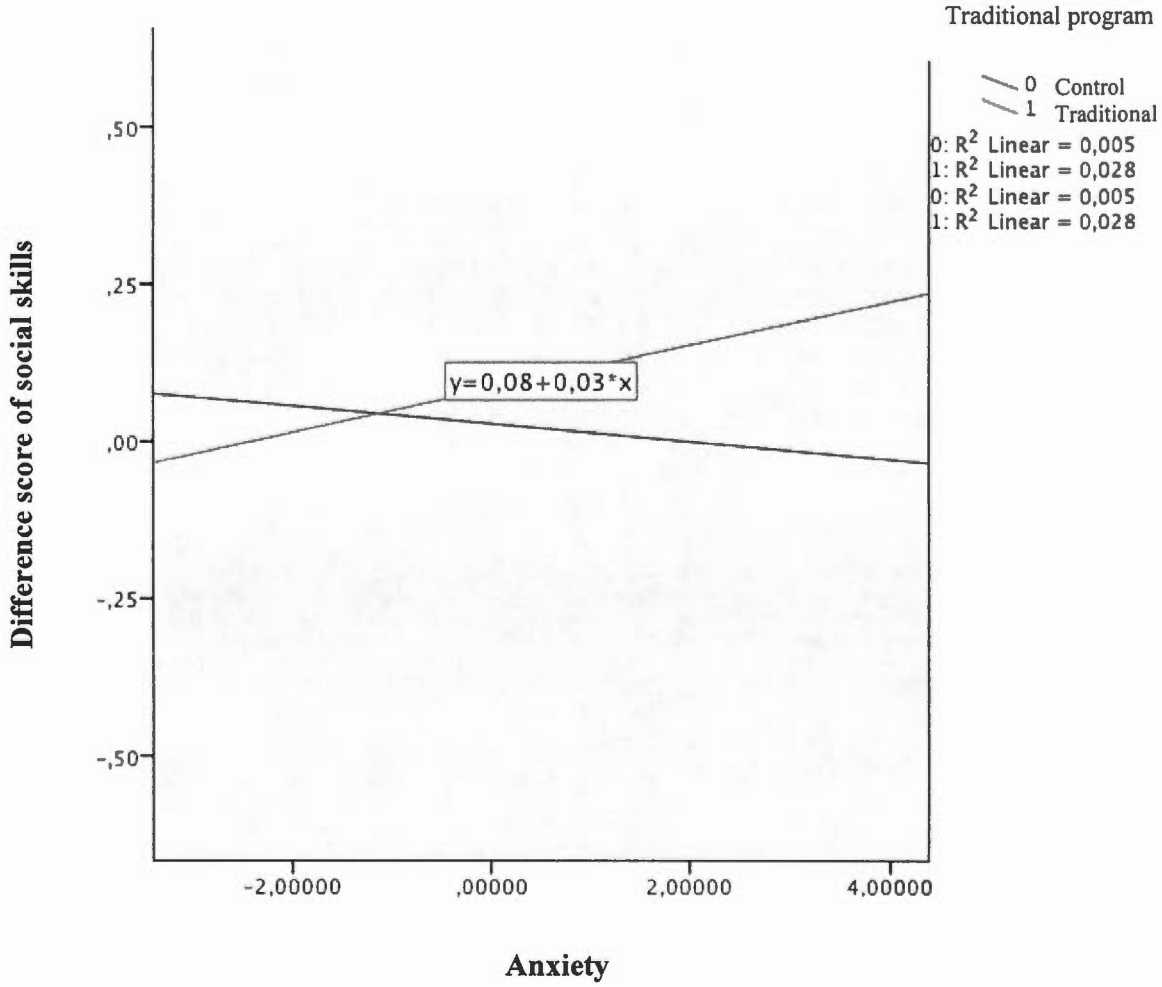
Next, the moderating effect of children's anxiety symptoms was tested. Results revealed that hypotheses regarding moderating effects of anxiety symptoms on improved outcomes (increased social skills and diminished externalized behaviours) were only partially met. Linear regression analyses with regards to social skills as rated by parents revealed a significant interaction effect of anxiety for both conditions, traditional $\beta = .22$, $p < .05$, and enhanced $\beta = .19$, $p < .05$. No significant

interaction effects were found with regards to social skills according to teachers. Likewise, no significant interaction effects were found concerning anxiety and either treatment condition on externalized behaviours, whether it be according to parents or teachers.

In order to decompose the interaction effects for anxiety and both treatment conditions with regards to social skills, two bivariate scatter plots were produced using the difference score of social skills (rated by parents) as the dependent variable and anxiety as the independent variable. The moderating effect of anxiety with respect to social skills indicates that for children exposed to the traditional version of the Fluppy program, the more they have anxiety symptoms, the more the difference score of social skills increases, which indicates better social skill abilities after the intervention (see Figure 5.1).

Figure 5.1

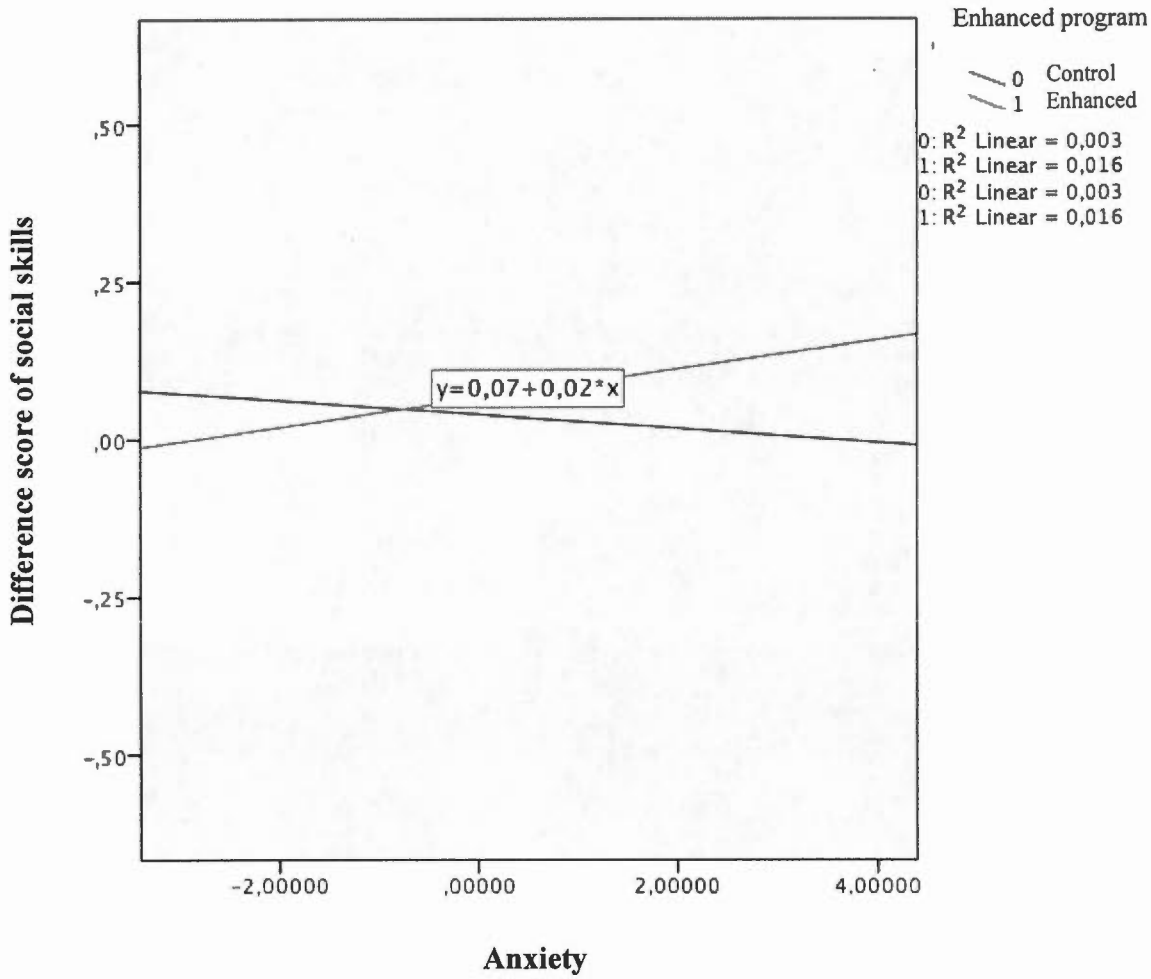
Moderation of anxiety and social skills with respect to children exposed to the traditional version of the Fluppy program



Similar results regarding social skills were obtained with the enhanced version of the program and anxiety, albeit with less pronounced differences than what was found with the traditional program. In other words, after being exposed to the enhanced version of the Fluppy program, anxiety symptoms also translated into better social skills (see Figure 5.2).

Figure 5.2

Moderation of anxiety and social skills with respect to children exposed to the enhanced version of the Fluppy program



CHAPTER VI

DISCUSSION

This study's objective was twofold: (1) to examine the associations between anxiety symptoms, child-specific and family characteristics amongst kindergarteners displaying high levels of disruptive behaviours, and (2) to uncover the moderating effect of anxiety symptoms on the effectiveness of two versions of a multi-component prevention program.

As mentioned previously, some progress has indeed been made with respect to identifying programs that are effective in decreasing child disruptive behaviours. Nevertheless, such programs continue to be only moderately effective. Several reasons can account for this, the main one being that little is known about the particular characteristics of disruptive children. For instance, such children often present co-occurring symptoms of anxiety, which have the potential to greatly impact the effectiveness of intervention models. Regardless, anxiety symptoms are still vastly ignored in prevention and intervention programs. An examination of the associations between anxiety symptoms and child-specific and family characteristics is thus crucial in the understanding of such children and the explanations as to why they do not respond as fully as expected to the present interventions.

Subsequent to elucidating different associations between co-occurring anxiety symptoms and disruptive children, another important question is whether the co-occurrence hinders or positively contributes to the effectiveness of a program. Hence, evaluating the moderating effect of anxiety symptoms on the effectiveness of the Fluppy program is of significant concern if we want to adjust the present program to better suit the needs of the children it is meant to help.

The following section is displayed by objective, where different subsections refer to the different research questions that were explored. Hence, the first part will discuss the results pertaining to the associations between anxiety and the child-specific and family characteristics of disruptive children, whereas the second part will discuss the results with respect to the moderating effect of anxiety on the effectiveness of the Fluppy program.

6.1 First Objective

6.1.1 Associations Between Child-specific Characteristics and Symptoms of Anxiety

Results for our first objective showed that our hypotheses were only partially met, being that two child-specific characteristics (impulsivity and shyness/withdrawal) were indeed associated with symptoms of anxiety in disruptive children. However, the directions of certain relationships seem to go against our original assumptions. A detailed discussion of each variable follows.

Impulsivity was found to be positively associated with anxiety symptoms. In other words, the more children were anxious, the more they were impulsive. Although this relationship is positive and does not support our initial hypothesis which stated that impulsivity, a combination of hyperactivity and inattention, would be lower when children displayed symptoms of anxiety, the finding does support a different line of research that indeed stipulates that anxiety, hyperactivity, inattention and other increased levels of symptomatology would be emblematic of disruptive children (Ackerman, Brown & Izard, 2003; Bubier & Drabick, 2009; Leve et al., 2005). Likewise, attention-deficit/hyperactivity disorder (especially the combined subtype with hyperactivity-impulsivity and inattentive components) and oppositional defiant

disorder are often associated with several maladaptive outcomes, such as higher levels of aggression, attention problems, depression, anxiety, peer and family difficulties, and academic problems (Carlson, Tamm, & Gaub, 1997; Lanza, & Drabick, 2011). In addition, Bubier and Drabick (2009) have differentiated reactive and proactive aggression and have postulated that co-occurring anxiety symptoms and reactive aggression may cause a child to respond impulsively in contexts that create frustration and elicit negative emotions, notably in situations that may lead to punishment and where the child cannot withdraw from the anxiety-provoking situation (also known as the frustration-aggression model). Although speculative, they deemed that this response could become a maladaptive way of responding to such situations and in turn lead to reactive aggression. Seeing as research regarding anxiety symptoms and disruptive children is immensely divided, some indicating that children would most likely be reserved, inhibited and withdrawn (symptoms which may serve as a protective factor for disruptive behaviour), and those deeming that on the contrary, anxious children will be rather aggressive, impulsive and disruptive, the fact that our hypothesis is not met does not translate into a failed attempt to demonstrate a particular relationship. Our findings, with a particular sample of disruptive kindergarteners, along with non-clinical levels of both anxiety symptoms and disruptive behaviours, simply support the second current in the field. Moreover, it may be the case that we fall within such a current, as opposed to the other, due to a symptom overlap between our disruptive behaviour variable and that of the reactive aggression and frustration-aggression model proposed by Bubier and Drabick.

In addition, anxiety symptoms and shyness/withdrawal were positively related to one another, as it was originally expected. This indicates that disruptive children, who also display anxiety symptoms, are more likely to be shy and withdrawn. Seeing as a correlation does not imply causation, it may also mean that the more a child is shy and withdrawn, the more he or she will be anxious. This pattern of results resembles

that of prior studies in the field of developmental psychopathology (Leve et al., 2005; Mesman & Koot, 2000), which state that temperamental characteristics such as shyness/withdrawal may lead to internalizing problems such as anxiety in community-based samples, and may in turn have a protective effect on children since such characteristics are negatively associated with externalizing problems in adolescence.

Furthermore, we had hypothesized a negative association between social skills and anxiety. In other words, we deemed that the more disruptive children were anxious, the less they would demonstrate social skills such as cooperation, assertion, and self-control. Although the direction of the relationship between social skills and anxiety was indeed accurate, significant results were not found on the basis of our sample. Perhaps this can be explained by the fact that the disruptive children in our sample were only slightly anxious. Accordingly, perhaps higher levels of anxiety symptoms would in fact be associated with significantly lower social skills. It would be interesting to assess the relationship amongst disruptive children with higher levels of anxiety symptoms.

6.1.2 Associations Between Family Characteristics and Symptoms of Anxiety

The second part of our first objective was to examine the relationship between family characteristics and anxiety symptoms of children with high levels of disruptive behaviour. Results showed that our hypotheses were partially met, being that two out of the three family characteristics (couple adjustment and parental hostility) were indeed associated with higher levels of child anxiety symptoms.

As it was hypothesized, results from the correlations indicated that couple adjustment is negatively associated with anxiety symptoms. This indicates that low satisfaction

and adjustment between the couple is associated with increased anxiety symptoms amongst children with disruptive behaviours. This result goes in line with the work done by Leve and colleagues (2005), which stated that high marital discord (or low couple adjustment) was indeed correlated with internalizing behaviours in childhood and adolescence for both genders.

Furthermore, a significant and positive relationship was found with respect to parental hostility and anxiety. Such results indicate, for example, that the higher the parental hostility (coldness, lack of acceptance, hostility, rejection), the more disruptive children are likely to display symptoms of anxiety. This result supports previous research by Granic (2014) and Leve and colleagues (2005) who have postulated that hostility, or other harsh and/or unpredictable parental discipline practices often leads to anxiety in children. Consequently, it is deemed that hostile parenting often arise as a means of suppressing oppositional behaviours in disruptive children, and that these negative parent-child interactions would in turn lead to anxiety (Beauchaine et al., 2005; Granic, 2014). In addition, this is coherent with research by Schermerhorn and Bates (2012), which stated that the child's temperament influences the type of parenting he or she receives. For example, children with high levels of anxiety (negative emotionality) or self-regulatory difficulties are more difficult to manage for parents than other children, and so although they would need parental warmth and consistent and coherent discipline practices, their temperament may lead to parenting styles that may not suit their needs.

Results from the correlations revealed that maternal depression in our sample was not significantly related to anxiety symptoms amongst disruptive children. This goes against previous research that has shown that certain genetic predispositions or environmental disadvantages (such as a depressed parent), may translate into a

fearful/shy temperament in early childhood and later anxiety/depression (Goldsmith & Lemery, 2000). However, Leve and colleagues (2005) showed that such a result may in fact be an interaction between a child's gender, child-specific characteristics and family environments, and that distinct combinations may result in significantly different outcomes. For instance, they showed that high impulsivity and low fear/shyness interacted with parental harsh discipline to predict girls' externalizing problems, whereas low impulsivity interacted with maternal depression to predict boys' externalizing problems. This suggests different and separate gender paths, with girls and boys being more vulnerable to different types of environments. It should also be noted that other family or maternal characteristics not assessed in this study might in fact be correlated with anxiety symptoms in children, such as children who have mothers with a diagnosed anxiety disorder. Other variables, such as the quality and proximity of the relationship between the mother and child may also explain the association, or lack thereof, between maternal depression and anxiety symptoms in disruptive children.

6.1.3 The Contribution of Child and Family Characteristics to Anxiety Symptoms

After including the four significant variables from the preceding correlations (impulsivity, shyness/withdrawal, couple adjustment and parental hostility) simultaneously into a regression, results indicate that they collectively explain 23% of the variation in anxiety amongst children with disruptive behaviours. This supports past research that has displayed that child-specific characteristics (such as impulsivity, fear and shyness) and family environment (hostile parenting, parental depression and marital adjustment) are some of the sturdiest risk factors for internalizing and externalizing problems amongst children (Leve et al., 2005). Further examination revealed a unique contribution of all four characteristics to the variance in anxiety, whilst impulsivity was identified as a key variable in accounting for

variation in child anxiety symptoms. Such a strong relationship between impulsivity and anxiety can also be found in a study by Cosi, Hernández-Martínez, Canals and Vigil-Colet (2011), which established that impulsivity, especially the motor type related to inhibition deficits, is strongly correlated with internalizing disorders such as anxiety and depression.

In summary, the present results indicate that child-specific characteristics such as impulsivity and shyness/withdrawal, and family characteristics such as low couple adjustment and parental hostility, are indeed correlated with higher levels of anxiety symptoms in disruptive children. Knowledge on the directions and strength of relationships between anxiety and the child-specific and family characteristics allow us to better comprehend our particular sample of disruptive children. This much clearer portrait of disruptive and anxious children in the Fluppy sample points to important implications for present intervention practices. As mentioned earlier, such characteristics are some of the elements that lead to poor outcomes in current interventions practices. Understanding what is emblematic of such children is thus a crucial step in helping to create future interventions that will take into account such children's particularities, in hopes to mend the gaps and avoid replicating the same limitations that lead to ineffective interventions. In fact, the enhancement of a program due to knowledge about the specificities of its sample was achieved by Webster-Stratton with the Incredible Years intervention program. Following the finding that children who resist to the interventions and maintain behavioural problems were living in families most affected by substance abuse, maternal depression and domestic violance, Webster-Stratton (1990) added interventions to her basic program to increase communication within couples and decrease harsh discipline, thereby promoting a behaviour change amongst children. Given the positive results of this addition, the Incredible Years program now consists of the basic and advanced components and is offered to all families with children with

behavioural problems. Such a modification could not have been made without knowledge of the particular child and family characteristics of the sample.

6.2 Second Objective

A second step is clarifying whether the co-occurrence of anxiety symptoms and disruptive behaviour help or obstruct children from benefiting from the current intervention programs. This is achieved by assessing the moderating effect of anxiety on the effectiveness of the Fluppy program, thereby evaluating if disruptive children with higher levels of anxiety have greater social skills and fewer externalized behaviours after the intervention compared to those with fewer anxiety symptoms.

Firstly, the main effects of the interventions with respect to social skills and externalized behaviour will be discussed. Despite the fact that these effects were not the primary focus of this essay, it is nonetheless important to address them before providing more detailed analyses regarding the moderating effects of anxiety on treatment effectiveness.

6.2.1 Intervention Effects on Social Skills

Our findings show a main effect for the traditional program regarding social skills as rated by parents, suggesting that disruptive children who were exposed to the traditional version of the Fluppy program had better social skills after the intervention than those who were exposed to the control condition. This result partially supports the previous study by Poulin and colleagues (2013) concerning the effectiveness of the Fluppy program, which stipulated that aggressive children in both the traditional and enhanced groups displayed an increase in social skills at the end of kindergarten compared to children in the control condition as rated by parents. Our results for the

enhanced version do however go in the direction we expected, but do not reach the level of significance. Considering the complexity of the compete Fluppy program, as well as the different interventions implemented throughout the different experimental conditions (some of which were not assessed in the present research), the type of statistical analysis used may perhaps explain the lack of a main effect in the present study with regards to social skills in the enhanced version of the program.

With regards to teacher ratings of social skills, solely a main effect of the enhanced Fluppy program was found, indicating that teachers noticed an increase in social skills post-intervention, only when children were exposed to the enhanced Fluppy program. Children exposed solely to the traditional program did display an increase in social skills as expected, but this increase did not reach the level of significance. It seems appropriate to assume that children would indeed benefit to a greater extent by the enhanced program with regards to social skills in their school setting, since friendship skills are additionally taught in the enhanced Fluppy program through paired play sessions with a prosocial classmate to promote social skills abilities. Furthermore, this indicates that when we intensify the interventions, as it was the case in the enhanced Fluppy program, teachers perceive increased social skills in disruptive children. Hence, when children are disruptive and anxious (and allegedly more receptive to the interventions) more intense and diverse interventions lead to improved social skills in the school setting. All things considered, this supports the line of thought that numerous interventions are associated with steeper reductions in troublesome behaviour; hence the more we intervene, the better the treatment effects (Beauchaine et al., 2005; Webster-Stratton et al., 2004).

6.2.2 Anxiety as a Moderator for Social Skills

Results indicated that anxiety served as a moderator for the effectiveness of the

Fluppy program with regards to social skills. In other words, children who displayed anxiety symptoms and who participated in the traditional or the enhanced version of the Fluppy program had bigger improvement between pre and post ratings of social skills according to parents, than children who were only exposed to the control condition. However, in this case, it also indicates that the effect of the Fluppy intervention does not apply to all children with high levels of disruptive behaviour, but particularly to those who had higher levels of anxiety. This result is central to the present research as it elucidates the optimistic effects that anxiety can bestow upon children who are exposed to treatment interventions. In fact, anxiety was not significantly related to social skills in the first research question, yet it moderates the relationship regarding better outcomes of social skills when paired with a treatment condition. Such results are consistent with studies that report that some children with comorbid conduct problems and anxiety, are more responsive to treatment than children with conduct problems alone (Beauchaine et al., 2005). Perhaps this is the case because the more disruptive children are anxious, the more they are fearful in ambiguous and new situations, more capable of inhibition, of listening (are less reactive), and more receptive to the interventions proposed by the adult. In addition, contrary to children who are solely disruptive, disruptive and anxious children may manifest more distress symptoms. In fact, seeing as the needs may be more apparent, it is possible that parents may be more willing to approach them and help them with problem solving, rather than simply punishing them for misconduct. Likewise, a child who is unable to play adequately with his or her peers, but who is disturbed by this incapacity and feels the need to be helped, may be more attentive to the Fluppy interventions that target such skills. In light of the fact that the Fluppy program aims to promote social skills, among other things, it makes perfect sense to conceive that disruptive and anxious children respond better to the interventions and improve their social skills. Hence, such children are more responsive to a program that gives them a means to deal with the uncomfortable situations they are facing. Conversely, purely aggressive children may not be as distressed (or less conscious of their emotions) and

are perhaps less motivated and mobilized to change.

6.2.3 Intervention Effects on Externalized Behaviour

Similar effects were found with regards to parent ratings of externalized behaviour. A main effect of the traditional program was also found, but no effect of the enhanced program. This suggests that according to parents, children who were exposed to the traditional Fluppy program revealed fewer externalized behaviours post intervention as compared to children who were exposed to the enhanced version of the program or the control condition. Given that the enhanced version does not have added components targeting externalized behaviours, but rather academic and friendship skill interventions, this can explain why children exposed to the enhanced version did not have fewer externalized behaviours than children exposed to the traditional Fluppy program. In fact, it might take the added components in the enhanced version of the program more time and require more exposure in order for the complementary positive components to translate into decreased externalized behaviours.

Conversely, such a reduction effect regarding externalized behaviours was not found according to teachers, regardless of the intervention children received. Perhaps this is simply an indication that the interventions targeting externalized behaviours are less effective in the school setting. This could mean that children used their newly acquired abilities more often in their home setting before generalizing them to other settings such as the classroom.

6.2.4 Anxiety as a Moderator for Externalized Behaviour

Results indicate that anxiety did not moderate the effects of the Fluppy program with regards to externalized behaviour. It must be noted that studies that have found that

anxiety attenuates the gravity and course of disruptive problems tend to be found amongst children with anxiety disorders; children who consequently display clinical levels of anxiety with significant impairment of daily functioning (Mason et al., 2004, Pine et al., 2000, Walker et al., 1991). Seeing as our sample had sub-clinical symptoms of anxiety, it may be the reason why anxiety did not significantly attenuate the level of externalized behaviours. In addition, kindergarteners in our sample were only slightly anxious at school entry according to parent ratings. In other words, not only did they display sub-clinical levels of anxiety symptoms, but those symptoms were also minimal on our assessment scale. Secondly, although both teacher and parent ratings of disruptive behaviours needed to be above the 65th percentile in order for a child to be considered at-risk and targeted for the Fluppy program, such a cut-off is a rather low indication of troublesome behaviour. This allowed us to identify the most disruptive children, as only 15% of the sample met the double criterion, but seeing as many researchers often use a much more elevated threshold (above the 70th, 80th or even 90th percentile), it may be that somewhat low-risk participants were targeted at the initial screening time. It is perhaps because of the low initial level of disruptive behaviour that the difference score of externalized behaviour did not yield significant effects post-treatment. Thirdly, based on the latest effectiveness trial of the Fluppy program, girls seemed to have significantly better response rates to the prevention interventions than that of boys. Seeing as 70% of the sample in this study comprised disruptive boys, it is possible that the lack of moderation effect with respect to externalized behaviour was due to this gender factor. Perhaps this can be explained by the fact that the intervention activities proposed by the Fluppy program, may have been better adapted to the learning style of girls, which may have lead to a better assimilation and receptiveness as a result. In addition, it is also possible that girls react more rapidly to positive social expectations than boys, and that longer interventions may be needed in order for boys to display a reduction in externalized behaviours. Finally, as previously mentioned, implementation findings suggest that

intervention components were not applied in their full and intended intensity. This could also explain the lack of moderation effects for externalized behaviour.

6.2.5 Characteristics Associated with Anxiety Symptoms Amongst Disruptive Children, and its Moderation Effects on The Fluppy Program

In summary, the present essay highlights the fact that child-specific characteristics such as impulsivity and shyness/withdrawal, and family characteristics such as couple adjustment and parental hostility, are indeed associated with higher levels of anxiety symptoms in disruptive kindergarteners. This indicates that not all disruptive children are similar in nature and should hence be treated with programs that take into account their particular characteristics and co-occurrences. In addition, results indicate that anxiety moderated the effect of the traditional and the enhanced Fluppy program with regards to social skills, as rated by parents. This suggests that disruptive children who also displayed more symptoms of anxiety had better social skills post-interventions, compared to children who were less anxious. This is consistent with studies that report that some children with comorbid conduct problems and internalizing problems (often depression or anxiety) are more responsive to treatment than children with conduct problems alone (Beauchaine et al., 2005). Furthermore, although few effects were found with respect to teacher ratings, such results are of no surprise since effectiveness trials have indeed demonstrated fewer effects with respect to teacher ratings and much bigger effects according to parents. In fact, past research on clinical interventions targeting child disruptive and oppositional behaviours have demonstrated that parent perceptions may often be affected by the demand characteristics of assessments and interventions (Dishion & Andrews, 1995; Stoolmiller et al., 2000). Hence, it would seem as though parents see bigger improvements than do teachers after the interventions, a statement that does indeed reflect our findings.

CHAPTER VII

STRENGTHS AND LIMITATIONS

This study offers some strong methodological features. It used an experimental design with a large sample size of boys and girls that were randomly distributed amongst the treatment conditions. Moreover, different informants (parents and teachers) and pre/post assessments were obtained for each variable in the second objective. In addition, homogeneous sampling was obtained through a thorough screening process, which resulted in strong internal validity. Finally, being in the context of prevention research, it used indications of symptomatology rather than a particular diagnostic criterion, an important, albeit scarce procedure in the field.

Nonetheless, findings should be interpreted with caution. Firstly, it must be noted that although our sample was homogenous socio-demographically, replication of the results with more culturally and economically diverse samples may be beneficial to enhance the study's generalizability. Secondly, it may have also been problematic that those acting in the intervention (parents and teachers) are those who assessed the children pre and post-intervention. Hence, objectivity may have been an issue. Nevertheless, parents and teachers are simultaneously those better placed to supply information on children's behaviour at home and in the classroom, and so are necessary to our study. In addition, the convergence of the results from both raters may indeed counterbalance such a limitation. It would however be beneficial if a psycho-educator or teacher assistant, who is not implicated in the study, could serve as a double-blind agent and objectively evaluate all children in classes where the Fluppy program was implemented. In addition, direct observations as well as peer nominations could have been used in order to help reduce the respondent bias. Thirdly, the measure of anxiety contained only seven items and so may not have been

sensitive enough to capture the true essence of such symptomatology amongst kindergarteners, especially since internalized behaviours such as anxiety symptoms are hard to decipher in children. Nonetheless, such items were very similar to other instruments listed in subsequent studies, and still yielded significant results (Achenbach, Dumenci, & Rescorla, 2003; Tremblay et al., 2013). In addition, similar research in the field would normally use an anxiety cut-off score in order to compare anxious children with children who are considered to be non-anxious. However this could not be achieved in the present research. Seeing as the measure used to assess anxiety does not contain a clinical cut-off and hence does not provide a diagnostic criterion for an anxiety disorder, dividing the group into anxious and non-anxious children based on a certain threshold was not feasible. In addition, the distribution of scores on this variable did not contain a natural cut-off, and so did not allow us to form two distinct groups using this approach either. It was thus decided to use anxiety as a continuous variable, a method that allowed us to keep all variability as well as provide more statistical power.

CHAPTER VIII

IMPLICATIONS FOR THE PRACTICE AND FUTURE RESEARCH

All in all, this study has shown the extent to which child-specific and family characteristics explain variance in anxiety symptomatology amongst disruptive children, which is essential to the comprehension of elements that may affect intervention effectiveness. As it was mentioned earlier, anxiety is often neglected in existing developmental theories of externalized behaviour and is often ignored in interventions. Knowing that anxiety symptoms play an important role in the adherence to interventions, especially with respect to social skills, and that child-specific and family characteristics are associated with anxiety symptomatology, can greatly aid researchers to adapt their programs and to consider the particularities of disruptive children who may also be anxious. Future research should attempt to replicate such findings with a different population of disruptive and anxious children, once again at non-clinical levels of symptomatology, in order to be capable of generalizing the vastly interesting results of this current study.

The partial significant results for the second objective brings upon important knowledge with regards to anxiety symptoms and treatment outcomes of disruptive children. Understanding elements that contribute to or have no effect on treatment conditions and intervention impacts is an important step towards developing interventions that are efficient for children who are not helped by current approaches and programs. We know that anxiety symptoms, at least in the Fluppy sample, did help children grasp the information provided by the interventions and so children exposed to both the traditional and enhanced program had better social skills according to parents. In order to maximize the effectiveness of other intervention programs, it should be noted that an initial screening for anxiety symptoms ought to

be made amongst all children to be included in prevention or intervention programs. Not only would this provide a clearer picture of the characteristics of the disruptive children, but it would also allow researchers to better intervene. For instance, researchers could tailor their interventions and add workshops, which would target emotional management. Clinically, disruptive behaviours often conceal other emotions. Workshops that target recognition, identification and adequate expressions of these emotions, could help children become more conscious of with their feelings and individual needs, which could in turn contribute to a better all-around adherence to the program. What's more, little is known about other elements that can moderate the impact of prevention programs. Future research should assess other possible moderators amongst children with high levels of disruptive behaviour (cognitive capacities, executive functions, social desirability and resilience, to name a few) in order to narrow the gap between intervention programs and treatment response. It would also be interesting to assess the moderating effect of particular themes related to anxiety, notably social anxiety, performance anxiety, and separation anxiety, once again at a non-clinical level.

Moreover, the results of this essay bring about important considerations for the Fluppy program in particular. Knowing that impulsivity, shyness/withdrawal, low couple adjustment and parental hostility are associated with higher levels of anxiety symptoms, it would be pertinent to tailor the intervention components of the program and include elements that target such characteristics. For instance, family interventions could have additional sessions, which would include interventions aimed directly at reducing parental hostility and increasing couple adjustment (for families in need). Furthermore, parental interventions should also include psychoeducational sessions of emotional management, in order to help parents validate and normalize their child's negative emotions, all while providing parents with strategies to help their children with self-regulation. A better home environment

could greatly help children benefit to an even greater extent from the Fluppy components, and may help generate better results regarding decreased externalized behaviours. Furthermore, it seems appropriate to incorporate a thorough screening questionnaire at the very beginning of the program that assesses anxiety symptoms in order to have a better idea of the sample of children we are dealing with. The teacher intervention could be enhanced by adding a workshop pertaining to the recognition of anxiety symptoms and where training would be done amongst teachers to help children work through their distress and negative emotions around the classroom. This component could then be added to the social skills and problem-solving training intervention, given to the entire classroom of a targeted child, in order to help children regulate their emotions and anxiety symptoms. This could also help children focus their attention on the nonaggressive and socially acceptable problem-solving strategies being taught, and thereby has the potential to generate even greater treatment effectiveness.

CONCLUSION

Disruptive behaviours are common during the preschool years and can hinder a child's development if measures are not taken early on to reduce them. Many prevention and intervention programs have been implemented amongst kindergarteners in hopes to decrease disruptive behaviours, increase social skills and problem solving abilities, and in turn help children get on more positive paths. However, although numerous studies have been conducted regarding the unfavourable outcomes of disruptive behaviours on the development of a child and the need to intervene as soon as possible, few of them have assessed their effects on children with sub-clinical levels of disruptive behaviour and even less have evaluated their effects when anxiety symptoms are added to the mix. This is the case despite the fact that many disruptive children also exhibit symptoms of anxiety. Overlooking the co-occurrence between disruptive behaviours and anxiety symptoms is one of the main reasons for a limited understanding of children's disruptive behaviour and may hence explain why current intervention programs remain only moderately effective. This doctoral essay thus had two purposes: to examine the associations between anxiety symptoms, child-specific characteristics and family characteristics of disruptive kindergarteners, and to assess the moderating effect of anxiety symptoms on the effectiveness of the Fluppy program.

Results have shown that both child-specific (impulsivity and shyness/withdrawal) and family characteristics (low couple adjustment and parental hostility) are associated with higher anxiety symptoms amongst disruptive children. Such relationships are of great significance as they allow for a better comprehension of our sample of disruptive children. Targeting such associations in future intervention programs can help to improve the effectiveness of programs aimed to lower disruptive behaviours. Moreover, results indicate that the co-occurrence of disruptive behaviour and anxiety

symptoms allowed for a better adherence to the Fluppy program. Specifically, disruptive children who had higher levels of anxiety symptoms demonstrated increased social skills at the end of kindergarten according to parental ratings. This is of particular importance as it indicates that the presence of anxiety among disruptive kindergarteners may promote adherence to the Fluppy program, thereby fostering a positive response to the intervention. Such findings bring new insight with regards to co-occurring disruptive behaviour and anxiety symptoms, and its effects on prevention programs in the field of psychology.

APPENDIX A
ETHICS FORMS

[En-tête UQAM]

Montréal, le 27 février 2001

Madame France Capuano
Professeure
Département des sciences de l'éducation

Objet: Projet de recherche intitule: « *Prévention de la violence et du décrochage scolaire: Évaluation de l'impact d'un programme implanté à travers le Québec»,* déposé au CQRS.

Chère madame,

Suite au complément d'information reçu et aux recommandations émises par le Comité, il m'est agréable de vous confirmer l'acceptation de votre protocole de recherche au plan éthique. Vous trouverez ci-joint, le certificat émis par le Comité pour la durée totale du projet.

Je vous rappelle qu'il est de votre responsabilité d'informer le Comité des modifications qui pourraient être apportées à votre projet, en cours de réalisation, et qui ont trait à la participation de sujets.

Au nom du Comité, je vous remercie d'avoir apporté les précisions supplémentaires demandées. Je vous souhaite le plus grand succès dans la poursuite de vos travaux.

Diane Berthelette, Ph.D.
Professeure
Présidente du Comité
d'éthique de la recherche
avec des êtres humains

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Case postale 8888, succursale Centre-Ville
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UNIVERSITÉ DU QUÉBEC A MONTRÉAL

Comité d'éthique de la recherche avec des êtres humains

Conformité à l'éthique en matière de recherche impliquant la participation de sujets humains

Le Comité d'éthique de la recherche avec des êtres humains de l'UQAM a examiné le protocole de recherche suivant:

Responsable : France Capuano
Département : Sciences de l'éducation
Titre du projet : *Prévention de la violence et du décrochage scolaire: Évaluation de l'impact d'un programme implanté à travers le Québec*

Ce protocole de recherche est jugé conforme aux pratiques habituelles et répond aux normes établies par le «*Cadre normatif pour l'éthique de la recherche avec des êtres humains de l'UQAM*».

Le projet est jugé recevable au plan de l'éthique de la recherche chez l'humain.

Membres du Comité:

Mme Diane Berthelette, Professeure, Département d'organisation et ressources humaines
Mme Joanne Burgess, Professeure, Département d'histoire
Mme Jocelyne Couture, Professeure, Département de philosophie
M. Diane Demers, Professeure, Département des sciences juridiques
M. Jean Fortier, Agent de recherche, CLSC des Faubourgs
M. Claude Hamel, Professeur, Département des sciences biologiques
Mme Ursula Hess, Professeure, Département de psychologie
M. Jean-Marc Larouche, Professeur, Département des sciences religieuses
M. Frédéric Legault, Professeur, Département des sciences de l'éducation
Mme Jocelyne Thériault, Professeure, Département de sexologie

27 février 2001
Date

Présidente du Comité

UQÀM

APPENDIX B
MEASURE FOR CHILD BEHAVIOUR

LE COMPORTEMENT DE VOTRE ENFANT

Nous aimerions vous poser quelques questions sur la manière dont votre enfant concerné par ce projet s'est senti ou a agi au cours du dernier mois. Indiquez-nous ce qui, selon vous, décrit le mieux les comportements de votre enfant. Dans quelques cas, il est possible que la situation ne s'applique pas, encerclez alors « 7 » pour « non applicable ».

Au cours du dernier mois, à quelle fréquence diriez-vous que votre enfant concerné par ce projet…		**Jamais ou pas vrai**		**Quelques fois ou un peu vrai**		**Souvent ou très vrai**		**Non applicable**
1.	… a tenté d'arrêter une querelle ou une dispute ?	1	2	3	4	5	6	
2.	... n'a pu rester en place, a été agité/e ou hyperactif/ve ?	1	2	3	4	5	6	
3.	... a endommagé ou a brisé ses propres choses ?	1	2	3	4	5	6	
4.	… a abandonné facilement ?	1	2	3	4	5	6	
5.	... a essayé d'aider quelqu'un qui s'était blessé ?	1	2	3	4	5	6	7
6.	... a été timide en présence d'enfants qu'il/elle ne connaissait pas ?	1	2	3	4	5	6	
7.	… a refusé d'aller ou de rester quelque part sans ses parents ?	1	2	3	4	5	6	7
8.	... a volé des choses ?	1	2	3	4	5	6	
9.	… a invité un enfant qui regardait les autres à prendre part à un jeu ?	1	2	3	4	5	6	
10.	... a été rebelle ou a refusé d'obéir ?	1	2	3	4	5	6	
11.	… a sursauté pour un rien ?	1	2	3	4	5	6	
12.	… n'a pas hésité à admettre ses torts afin de mettre fin à une dispute avec un/e camarade ?	1	2	3	4	5	6	
13	... a semblé malheureux/euse ou triste ?	1	2	3	4	5	6	

Au cours du dernier mois, à quelle fréquence diriez-vous que votre enfant concerné par ce projet…		**Jamais ou pas vrai**		**Quelques fois ou un peu vrai**		**Souvent ou très vrai**		**Non applicable**
14.	... s'est bagarré/e ?	1	2	3	4	5	6	
15.	… a démontré peu d'intérêt pour des activités impliquant d'autres enfants ?	1	2	3	4	5	6	
16.	… a offert d'aider à nettoyer un gâchis fait par quelqu'un d'autre ?	1	2	3	4	5	6	
17.	... a encouragé des enfants à s'en prendre à un autre enfant ?	1	2	3	4	5	6	
18.	... a été facilement distrait/e, a eu de la difficulté à poursuivre une activité quelconque ?	1	2	3	4	5	6	
19.	… a démontré peu d'intérêt pour des jeux, sorties ou autres activités plaisantes ?	1	2	3	4	5	6	
20.	... a fait rire de lui par les autres enfants ?	1	2	3	4	5	6	
21.	... lorsqu'il/elle était fâché/e contre quelqu'un, a essayé d'entraîner d'autres à détester cette personne ?	1	2	3	4	5	6	
22.	… a agi sans réfléchir ?	1	2	3	4	5	6	
23.	... n'a pas semblé avoir de remords après s'être mal conduit/e ?	1	2	3	4	5	6	
24.	... a préféré jouer seul/e plutôt qu'avec d'autres enfants ?	1	2	3	4	5	6	
25.	… a été préoccupé par la perte ou le fait qu'il puisse arriver quelque chose à un de ses parents ?	1	2	3	4	5	6	
26.	... n'a pas été aussi heureux/euse que les autres enfants ?	1	2	3	4	5	6	
27.	... s'est approché/e facilement d'enfants qu'il/elle ne connaissait pas ?	1	2	3	4	5	6	
28.	… a évité la compagnie des autres enfants ?	1	2	3	4	5	6	
29.	... a endommagé ou a brisé des choses qui appartenaient aux autres ?	1	2	3	4	5	6	
30.	... lorsqu'on le/la taquinait, a réagi de façon agressive ?	1	2	3	4	5	6	
31.	… a sauté d'une activité à l'autre ?	1	2	3	4	5	6	
32.	... a remué sans cesse ?	1	2	3	4	5	6	

Au cours du dernier mois, à quelle fréquence diriez-vous que votre enfant concerné par ce projet…		**Jamais ou pas vrai**		**Quelques fois ou un peu vrai**		**Souvent ou très vrai**		**Non applicable**
33.	... s'est fait frapper et/ou bousculer par les autres enfants ?	1	2	3	4	5	6	
34.	… a ressenti des malaises physiques, par exemple, des maux de ventre, maux de tête ou nausées lors de séparations d'avec ses parents ?	1	2	3	4	5	6	
35.	... a été incapable de se concentrer, ne pouvait maintenir son attention pour une longue période ?	1	2	3	4	5	6	
36.	… a été trop craintif/ve ou anxieux/se ?	1	2	3	4	5	6	
37.	… a cherché à dominer les autres enfants ?	1	2	3	4	5	6	
38.	… a été incapable d'attendre lorsqu'on lui promettait quelque chose ?	1	2	3	4	5	6	
39.	… a longtemps gardé rancune envers un/e camarade avec qui il/elle a eu une dispute ?	1	2	3	4	5	6	
40.	… lorsqu'il/elle était fâché/e contre quelqu'un, est devenu/e ami/e avec quelqu'un d'autre pour se venger ?	1	2	3	4	5	6	
41.	… n'a pas changé sa conduite après avoir été puni/e ?	1	2	3	4	5	6	
42.	… a pris beaucoup de temps à s'habituer à la présence d'enfants qu'il/elle ne connaissait pas ?	1	2	3	4	5	6	
43.	… a interrompu les conversations ou les jeux des autres ?	1	2	3	4	5	6	
44.	… a été impulsif/ve, a agi sans réfléchir ?	1	2	3	4	5	6	
45.	… a manqué d'énergie, s'est senti/e fatigué/e ?	1	2	3	4	5	6	
46.	… a dit des mensonges ou a triché ?	1	2	3	4	5	6	
47.	… lorsqu'on le/la contredisait, a réagi de façon agressive ?	1	2	3	4	5	6	
48.	… a été inquiet/ète ?	1	2	3	4	5	6	
49.	… a fait peur aux autres afin d'obtenir ce qu'il/elle voulait ?	1	2	3	4	5	6	
50.	… a eu de la difficulté à attendre son tour dans un jeu ?	1	2	3	4	5	6	
51.	… a eu tendance à faire des choses seul/e – a été plutôt solitaire ?	1	2	3	4	5	6	

Au cours du dernier mois, à quelle fréquence diriez-vous que votre enfant concerné par ce projet…	**Jamais ou pas vrai**		**Quelques fois ou un peu vrai**		**Souvent ou très vrai**		**Non applicable**
52. … lorsque quelqu'un lui a fait mal accidentellement (par exemple en le/la bousculant), il/elle s'est fâché(e) et a commencé une bagarre (une chicane) ?	1	2	3	4	5	6	
53. … lorsqu'il/elle était fâché/e contre quelqu'un, a dit de vilaines choses dans le dos de l'autre personne ?	1	2	3	4	5	6	
54. … a attaqué physiquement les autres ?	1	2	3	4	5	6	
55. … a consolé un enfant (ami, frère ou sœur) qui pleurait ou était bouleversé ?	1	2	3	4	5	6	7
56. … a pleuré beaucoup ?	1	2	3	4	5	6	
57. … a causé du vandalisme ?	1	2	3	4	5	6	
58. … s'est accroché/e aux adultes ou a été trop dépendant/e ?	1	2	3	4	5	6	
59. … s'est fait crier des noms par les autres enfants ?	1	2	3	4	5	6	
60. … a recherché la compagnie des autres enfants ?	1	2	3	4	5	6	
61. … a eu de la difficulté à rester tranquille pour faire quelque chose pendant plus de quelques instants ?	1	2	3	4	5	6	
62. ... a été nerveux/euse ou très tendu/e ?	1	2	3	4	5	6	
63. ... a frappé, mordu, donné des coups de pied à d'autres enfants ?	1	2	3	4	5	6	
64. ... lorsqu'on lui prenait quelque chose, a réagi de façon agressive ?	1	2	3	4	5	6	
65. ... n'a pas voulu dormir seul/e ?	1	2	3	4	5	6	
66. ... a été inattentif/ve ?	1	2	3	4	5	6	
67. ... a cherché à prendre contact avec un enfant avec lequel/elle s'est disputé ?	1	2	3	4	5	6	
68. ... a eu de la difficulté à s'amuser ?	1	2	3	4	5	6	

Au cours du dernier mois, à quelle fréquence diriez-vous que votre enfant concerné par ce projet…	**Jamais ou pas vrai**		**Quelques fois ou un peu vrai**		**Souvent ou très vrai**		**Non applicable**
69. ... est venu/e en aide à d'autres enfants (amis, frère ou soeur) qui ne se sentaient pas bien ?	1	2	3	4	5	6	7
70. ... a réagi très mal lorsqu'il/elle était éloigné/e de ses parents ?	1	2	3	4	5	6	
71. ... est capable de détecter si quelqu'un ment ?	1	2	3	4	5	6	
72. ... sourit peu ?	1	2	3	4	5	6	
73. ... est capable de deviner les intentions d'autrui ?	1	2	3	4	5	6	
74. ... perçoit facilement les sentiments d'autrui ?	1	2	3	4	5	6	
75. ... sait comment s'y prendre pour faire rire les autres ?	1	2	3	4	5	6	
76. ... se dit moins bon que les autres enfants ?	1	2	3	4	5	6	7
77. ... sait comment s'y prendre avec les autres pour les convaincre ?	1	2	3	4	5	6	

APPENDIX C
MEASURE FOR MATERNAL DEPRESSION

CESD

Les énoncés suivants traitent de la façon dont les gens peuvent parfois se sentir. Pour chaque énoncé, dites ce qui correspond le mieux au **nombre de fois** que vous vous êtes sentie de cette façon **dans les 7 derniers jours. Vous êtes-vous sentie de cette façon :**

A. Rarement ou jamais (moins d'une journée)
B. Quelques fois ou peu souvent (1 ou 2 jours)
C. Occasionnellement ou modérément (3 ou 4 jours)
D. Fréquemment ou toujours (5 ou 7 jours)

Durant les 7 derniers jours ...		**0**	**1**	**2**	**3**
18.	J'étais embêté(e) par des choses qui d'habitude ne me dérangent pas.	o	o	o	o
19.	Je n 'ai pas eu envie de manger; Je n'avais pas beaucoup d'appétit.	o	o	o	o
20.	Je sentais que j'étais incapable de sortir de ma tristesse même avec l'aide de ma famille et de mes amis.	o	o	o	o
21.	Je me sentais aussi bon que les autres.	o	o	o	o
22.	J'avais de la difficulté à me concentrer sur les choses que je faisais.	o	o	o	o
23.	Je me sentais déprimé(e).	o	o	o	o
24.	Je sentais que tout ce que je faisais me demandait un effort.	o	o	o	o
25.	J'avais de l'espoir face à l'avenir.	o	o	o	o
26.	Je pensais que ma vie était un échec.	o	o	o	o
27.	J'étais craintif(ve)	o	o	o	o
28.	J'avais un sommeil agité.	o	o	o	o
29.	Je me sentais heureux (se).	o	o	o	o
30.	Je parlais moins que d'habitude.	o	o	o	o
31.	Je me sentais seul (e).	o	o	o	o
32.	Les gens étaient peu aimables avec moi.	o	o	o	o
33.	Je prenais plaisir à la vie.	o	o	o	o

34.	J'ai eu des crises de larmes.	o	o	o	o
35.	Je me sentais triste.	o	o	o	o
36.	J'avais l'impression que les gens ne m'aimaient pas.	o	o	o	o
37.	J'avais de la misère à "démarrer".	o	o	o	o

APPENDIX D
MEASURE FOR COUPLE ADJUSTMENT

DAS

Les questions suivantes concernent la relation avec votre partenaire de couple. Complétez ce questionnaire seulement si la personne habite avec un-e conjoint-e depuis au moins un an.
La plupart des couples vivent des désaccords. Veuillez indiquer dans l'espace approprié, le degré approximatif d'accord ou de désaccord entre vous et votre partenaire dans les domaines suivants.

		Toujours d'accord	Presque toujours d'accord	Parfois en désaccord	Souvent en désaccord	Presque toujours en désaccord	Toujours en désaccord
38.	Le budget familial	o	o	o	o	o	o
39.	Les loisirs	o	o	o	o	o	o
40.	La religion	o	o	o	o	o	o
41.	Les marques d'affection	o	o	o	o	o	o
42.	Les ami-es	o	o	o	o	o	o
43.	Les relations sexuelles	o	o	o	o	o	o
44.	Les conventions sociales	o	o	o	o	o	o
45.	La philosophie de la vie	o	o	o	o	o	o
46.	La façon d'agir avec les parents / les beaux-parents	o	o	o	o	o	o
47.	Les objectifs, les buts et ce qu'on trouve important dans la vie	o	o	o	o	o	o
48.	La quantité de temps passé ensemble	o	o	o	o	o	o
49.	Les décisions importantes	o	o	o	o	o	o
50.	Les tâches ménagères	o	o	o	o	o	o
51.	Les intérêts et les activités pendant les temps libres	o	o	o	o	o	o
52.	Les décisions à propos du travail	o	o	o	o	o	o

		Toujours	La plupart du temps	Assez souvent	À l'occasion	Rarement	*Jamais*
53.	À quelle fréquence avez-vous discuté ou avez-vous pensé au divorce, à la séparation ou à terminer votre relation ?	o	o	o	o	o	o
54.	À quelle fréquence vous ou votre partenaire quittez-vous la maison après une dispute ?	o	o	o	o	o	o
55.	En général, à quelle fréquence pensez-vous que ça va bien entre vous et votre partenaire ?	o	o	o	o	o	o
56.	Vous confiez-vous à votre partenaire ?	o	o	o	o	o	o
57.	Vous arrive-t-il de regretter de vous être marié-e (ou de vivre ensemble) ?	o	o	o	o	o	o
58.	À quelle fréquence vous disputez-vous avec votre partenaire ?	o	o	o	o	o	o
59.	À quelle fréquence vous et votre partenaire vous «tapez-vous sur les nerfs » ?	o	o	o	o	o	o
	À quelle fréquence…	**À chaque jour**	**Presque à chaque jour**	**À l'occasion**	**Rarement**	***Jamais***	
60.	Embrassez-vous votre partenaire ?	o	o	o	o	o	
61.	Avez-vous des intérêts communs à l'extérieur de la maison ?	o	o	o	o	o	
	À quelle fréquence vous arrive-t-il …	**Jamais**	**Moins d'une fois par mois**	**Une ou deux fois par mois**	**Une ou deux fois par semaine**	**Une fois par jour**	**Plus d'une fois par jour**
62.	D'avoir un échange d'idées stimulants	o	o	o	o	o	o
63.	De rire ensemble	o	o	o	o	o	o
64.	De discuter calmement	o	o	o	o	o	o

65.	De travailler ensemble à un projet	o	o	o	o	o	o

DAS (suite)

Indiquez si les situations suivantes ont été problématiques au sein de votre relation au cours des dernières semaines.

Voici quelques situations où les couples sont parfois d'accord et parfois en désaccord. Indiquez si oui ou non, ces items ont causé des différences d'opinion ou des problèmes dans votre relation PENDANT LES DERNIÈRES SEMAINES.

		Oui	Non
66.	Être trop fatigué pour avoir des relations sexuelles	o	o
67.	Ne pas manifester d'affection	o	o

68. Les points de la ligne suivante représentent différents degrés de bonheur dans votre relation.

Le point central «heureux » représente le degré de bonheur que la majorité des gens retirent de la vie conjugale. L'échelle s'étend d'un côté vers une minorité qui est vraiment malheureuse et de l'autre côté, vers une minorité qui connaît un bonheur exceptionnel.

Veuillez indiquer le point qui décrit le mieux le degré de bonheur dans votre relation, considérée globalement :

	o	o	o	o	o	o	o
	Extrêmement Malheureux (se)	**Assez Malheureux (se)**	Un peu **Malheureux (se)**	**Heureux (se)**	**Très heureux (se)**	**Extrêmement Heureux (se)**	**Parfaitement Heureux (se)**

69. **Laquelle des phrases suivantes décrit le mieux ce que vous ressentez par rapport à l'avenir de votre relation ?**

	Je veux désespérément que ma relation réussisse et *je ferai tout* pour cela.	o
	Je veux beaucoup que me relation réussisse et *je ferai tout ce que je peux* pour cela.	o
	Je veux beaucoup que me relation réussisse et *je ferai ma juste part* pour cela.	o
	Ce serait bien si ma relation réussissait et *je ne peux pas faire beaucoup plus que ce que je fais actuellement* pour cela.	o
	Ce serait bien si ma relation réussissait, mais *je refuse de faire plus que ce que je fais actuellement* pour cela.	o
	Ma relation ne pourra jamais réussir et *je ne peux plus rien y faire*.	o

APPENDIX E
MEASURE FOR PARENTAL HOSTILITY

LES PRATIQUES ÉDUCATIVES

Cette quatrième section concerne vos pratiques éducatives à l'égard de votre enfant. En encerclant le chiffre correspondant aux réponses suivantes, indiquez-nous ce qui, selon vous, décrit le mieux votre situation.

		Pas du tout	Un peu	Passablement	Grandement	Tout à fait
1.	Vous avez des conversations amicales avec votre enfant.	1	2	3	4	5
2.	Vous renoncez à tenter d'obtenir de votre enfant qu'il fasse quelque chose, s'il ne le fait pas lorsque vous lui demandez.	1	2	3	4	5
3.	Vous récompensez votre enfant ou vous lui donnez quelque chose de spécial quand il/elle vous obéit ou se comporte bien.	1	2	3	4	5
4.	Vous voulez que votre enfant participe à des activités de loisirs organisées (ex : sports, arts, cours, etc.) afin qu'il/elle puisse y rencontrer d'autres enfants de son âge	1	2	3	4	5
5.	Après avoir décidé d'une punition, vous la modifiez lorsque votre enfant s'explique, argumente ou s'excuse.	1	2	3	4	5
6.	Vous emmenez votre enfant dans des endroits publics (ex : parc, piscine, centre de loisirs, etc.) où il/elle peut rencontrer des enfants de son âge.	1	2	3	4	5
7.	Vous aidez votre enfant à faire ses tâches scolaires.	1	2	3	4	5
8.	Vous avez l'impression que c'est plus compliqué que ça n'en vaut la peine d'obtenir de votre enfant qu'il fasse ce que vous voulez.	1	2	3	4	5
9.	Vous complimentez votre enfant quand il/elle fait quelque chose de bien.	1	2	3	4	5
10.	Vous demandez à votre enfant quels sont ses projets pour la journée à venir.	1	2	3	4	5
11.	Vous avez choisi le service de garde que votre enfant fréquente parce qu'il s'agit d'un endroit où il/elle peut se faire de bons amis.	1	2	3	4	5
12.	Vous décidez de ne pas punir votre enfant même s'il a enfreint une de vos règles.	1	2	3	4	5
13	Vous parlez avec votre enfant de ses amis.	1	2	3	4	5

14.	Vous avez choisi le quartier où vous habitez parce que votre enfant peut s'y faire de bons amis.	1	2	3	4	5
15.	Votre enfant esquive les conséquences de ses actes.	1	2	3	4	5
16.	Votre enfant participe à la planification des activités de votre famille.	1	2	3	4	5
17.	Vous ridiculisez/vous, vous moquez de votre enfant.	1	2	3	4	5
18.	Votre enfant réussit à contourner les règles que vous avez établies.	1	2	3	4	5
19.	Vous assistez aux différentes rencontres qui ont lieu à l'école de votre enfant.	1	2	3	4	5
20.	Vous savez *où* est votre enfant lorsqu'il/elle joue avec un(e) (ou des) ami(e,es) à un endroit autre que chez vous.	1	2	3	4	5
21.	Vous dites à votre enfant que vous appréciez qu'il/elle donne un coup de main à la maison.	1	2	3	4	5
22.	Vous avez de la difficulté à maîtriser votre enfant.	1	2	3	4	5
23.	Vous êtes irrité par votre enfant.	1	2	3	4	5
24.	Lorsque vous punissez votre enfant, la punition est efficace.	1	2	3	4	5
25.	Vous dites à votre enfant qu'il/elle vous tombe sur les nerfs.	1	2	3	4	5
26.	Vous donnez une claque à votre enfant quand il/elle fait quelque chose de mal.	1	2	3	4	5
27.	Lorsque votre enfant joue avec un ami à la maison, vous gardez un œil sur eux, mais vous ne vous impliquez pas directement dans leur jeu.	1	2	3	4	5
28.	Vous humiliez votre enfant devant ses amis quand il/elle fait des bêtises.	1	2	3	4	5
29.	Votre enfant vous obéit lorsque vous lui demandez de faire quelque chose.	1	2	3	4	5
30.	Vous savez *ce que fait* votre enfant lorsqu'il/elle joue avec un(e) (ou des) ami(e,es) à un endroit autre que chez vous.	1	2	3	4	5
31	Vous trouvez que les autres enfants font mieux que le vôtre.	1	2	3	4	5
32.	Vous vous demandez si vous aimez vraiment votre enfant.	1	2	3	4	5

		Pas du tout	Un peu	Passablement	Grandement	Tout à fait
33.	Les punitions que vous infligez à votre enfant font en sorte qu'il se comporte mieux.	1	2	3	4	5
34.	Vous savez *avec qui* est votre enfant lorsqu'il/elle joue avec un(e) (ou des) ami(e,es) à un endroit autre que chez vous.	1	2	3	4	5
35.	Vous criez après votre enfant quand vous êtes fâché.	1	2	3	4	5
36.	Vous contactez d'autres parents pour organiser des activités dans le but que votre enfant puisse jouer avec des jeunes de son âge.	1	2	3	4	5
37	Vous dites à votre enfant que vous avez honte quand il/elle se comporte mal.	1	2	3	4	5
38.	Si vous jugez qu'un camarade de jeu exerce une mauvaise influence sur votre enfant, vous allez interdire à votre enfant de jouer avec ce camarade.	1	2	3	4	5
39.	Votre enfant est un fardeau pour vous.	1	2	3	4	5
40.	Vous interdisez à votre enfant de jouer à certains jeux avec ses amis(es).	1	2	3	4	5
41.	Votre enfant vous obéit lorsque vous lui demandez d'arrêter de faire quelque chose.	1	2	3	4	5
42.	Si des jeux impliquant votre enfant et ses amis (es) suscitent des disputes, vous y mettez fin.	1	2	3	4	5
43.	Vous avez l'air de ne pas aimer votre enfant.	1	2	3	4	5
44.	Vous montrez à votre enfant comment s'y prendre pour se faire de nouveaux amis.	1	2	3	4	5
45.	Votre enfant accepte les punitions que vous lui imposez.	1	2	3	4	5
46.	Vous n'éprouvez pas de sympathie quand votre enfant a des problèmes.	1	2	3	4	5
47.	À chaque année, vous organisez une fête lors de l'anniversaire de votre enfant pour qu'il puisse y inviter ses camarades.	1	2	3	4	5
48.	Vous faites sentir votre enfant honteux (se) ou coupable quand il/elle se conduit mal.	1	2	3	4	5
49.	Vous montrez à votre enfant comment résoudre un conflit avec un ami.	1	2	3	4	5

	Pas du tout	Un peu	Passablement	Grandement	Tout à fait
	1	2	3	4	5
50. Vous retirez un privilège ou une somme d'argent à votre enfant pour le/la punir.					
51. Vous communiquez avec d'autres parents ou avec la gardienne pour vous informer sur la façon dont votre enfant se comporte avec ses camarades.	1	2	3	4	5
52. Vous envoyez votre enfant dans sa chambre pour le/la punir.	1	2	3	4	5
53 Vous frappez votre enfant avec une ceinture, une baguette ou un autre objet lorsqu'il/elle a fait quelque chose de mal.	1	2	3	4	5
54. Quand votre enfant est méchant, vous lui faites sentir que vous ne l'aimez plus.	1	2	3	4	5
55. Vous vous adressez à votre enfant en criant ou en hurlant lorsqu'il/elle a fait quelque chose de mal.	1	2	3	4	5
56. Vous suggérez à votre enfant d'amener un ami à la maison.	1	2	3	4	5
57. Vous expliquez calmement à votre enfant en quoi il/elle a tord, lorsqu'il/elle se comporte mal.	1	2	3	4	5
58. Lorsque votre enfant joue avec un ami à la maison, vous les laissez régler leurs propres difficultés.	1	2	3	4	5
59. Vous donnez à votre enfant des corvées supplémentaires pour le/la punir.	1	2	3	4	5
60. Vous laissez voir à votre enfant qu'il n'est pas désiré.	1	2	3	4	5
61. Vous demandez à votre enfant de vous parler de ses camarades de classe ou du service de garde.	1	2	3	4	5
62. Vous utilisez le retrait (s'asseoir ou être debout dans le coin) pour punir votre enfant.	1	2	3	4	5
63. Vous donnez à votre enfant des tâches ménagères supplémentaires pour le punir.	1	2	3	4	5
64. Lorsque votre enfant joue avec un ami à la maison, vous les aidez à commencer à jouer, puis vous vous retirez.	1	2	3	4	5
65. Vous vous plaignez au sujet de votre enfant.	1	2	3	4	5
66. Vous ignorez votre enfant lorsqu'il/elle se comporte mal.	1	2	3	4	5

	Pas du tout	Un peu	Passablement	Grandement	Tout à fait
67. Vous le dites à votre enfant lorsqu'il ou elle fait quelque chose de bien.	1	2	3	4	5
68. Vous donnez un coup de main dans le cadre de certaines des activités de votre enfant.	1	2	3	4	5
69. Vous jouez ou avez d'autres activités agréables avec votre enfant.	1	2	3	4	5
70. Vous demandez à votre enfant de vous parler de sa journée à l'école.	1	2	3	4	5
71. Vous reconduisez votre enfant à une activité spéciale.	1	2	3	4	5
72. Vous félicitez votre enfant lorsqu'il ou elle se comporte bien.	1	2	3	4	5
73. Vous serrez votre enfant dans vos bras ou vous l'embrassez lorsqu'il ou elle a fait quelque chose de bien.	1	2	3	4	5

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