Adolescent Affect Dysregulation
- General Introduction
Affective dysregulation is considered a central facet of most forms of psychopathology (e.g., Berenbaum, Raghavan, Le, Vernon, & Gomez, 2003; Bradley, 2000; Cicchetti, Ackerman, & Izard, 1995; Cole & Deater-Deckard, 2009; Gratz & Roemer, 2004; Keenan, 2000), including internalizing problems, such as anxiety (Mennin, Heimberg, Turk, & Fresco, 2002) and mood disorders (Gotlib, Joormann, Minor, & Cooney, 2006), as well as externalizing problems, such as conduct disorder (Beauchaine, Gatzke-Kopp, & Mead, 2007). The central position of affect dysregulation in the conceptualization of psychopathology manifests itself in current criteria for the diagnosis of mental disorders, as depicted in the *Diagnostic and Statistical Manual of Mental Disorders –Fourth Edition* (DSM-IV-TR; American Psychiatric Association [APA], 2000). For instance, criteria for depression include prolonged dysphoria and/or irritability, as well as mood lability, while criteria for anxiety disorders are persistent fear or excessive worry, and an inability to regulate these emotions, and high anger and irritability, a lack of guilt and labile mood are criteria for disruptive behavior disorders.

In turn, apart from being reflections of neurological activity, affective experiences are highly social phenomena, and are regarded as both sources and consequences of social interactions (Bell & Calkins, 2000; Zajonc, 1998). What is more, in addition to social interactions as inducers of affective experiences, many agree that one learns how to regulate affect in interactions within close social relationships, particularly the parent-child relationship (Fox & Calkins, 2003; Kopp, 1989; Morris, Silk, Steinberg, Myers, & Robinson, 2007; Zeman, Cassano, Perry-Parrish, & Stegall, 2006). Style and effectiveness of affect regulation in turn, also shape the nature of social relationships, resulting, for example in undesirable parent-child interactions, that may add to the risk for onset or aggravation of symptoms of psychopathology. Thus, considering the social context of affective experiences seems quintessential to our understanding of their relation with psychopathology. Specifically, the social context may influence the way affect is regulated, and, in turn seems to be influenced by affective regulation, and affective dysregulation.

Adolescence constitutes an important developmental period for the study of associations between affective dysregulation and psychopathology, and the role of the parent-child relationship for several reasons. Main developmental tasks of adolescents are achieving autonomy from parents, acquiring a deeper sense of identity and building intimate relationships with others. In order to do so, adolescents must increasingly rely on themselves for regulating emotions and behavioral impulses. That this at times is hard, especially in adolescence, is shown by heightened negative emotions (Larson & Lampman-Petraidis, 1989) and heightened variability of emotions (Larson, Csikszentmihalyi, & Graef, 1980) in adolescence as compared to childhood and adulthood, adolescent rises in prevalence rates of internalizing (e.g., anxiety, depression) and externalizing problems (aggressive and rule-breaking behavior) (e.g., Silk, Steinberg, & Morris, 2003), and at least temporal decreases in the quality of the adolescent-parent relationship (Furman & Buhrmeester, 1992). For example, adolescent strivings for autonomy may lead to increased or intensified conflict with parents (Laursen, Coy, & Collins, 1998), as the adolescent may feel restricted in these strivings by parental efforts to remain in control of the adolescent’s behavior. At
the same time, feelings of warmth, trust and support tend to decrease in the relationship between parents and adolescents (e.g., de Goede, Branje, & Meeus, 2009).

Despite the fact that adolescence presents a time of important changes in affective experience and regulation, of increasing psychopathology, and pervasive changes in social relationships, compared to research on affect in children and adults, research on affective development, and its sources and consequences during adolescence is still relatively scarce. The current thesis aims to address affective dysregulation, and its role in the development of psychopathology in early-mid adolescence in the context of the parent-adolescent relationship.

Several topics will be discussed in this introduction. First, the focus will be on associations between affective dysregulation and psychopathology, in general. In this section, I will also discuss different conceptualizations and operationalizations of affect dysregulation, and introduce the ones employed in the present thesis. Then, I turn to the question whether the link between emotion dynamics and psychopathology is specific (dynamics of discrete emotions linked to specific types of psychopathology) or general (general emotion dynamics linked to various types of psychopathology). Next, I will discuss affective dysregulation in the context of the parent-adolescent relationship, before I put links between the parent-adolescent relationship and psychopathology in the spotlight. Subsequently, I will highlight ways in which affective dysregulation and parent-adolescent interactions may jointly influence adolescent development, and how the broader environmental context may play a role. Finally, an outline of the studies that form the empirical part of this thesis, will be presented.

Affect Dysregulation and Psychopathology

Affect arises in response to events that are appraised as meaningful to the individual (Frijda, 1988). Whether an event elicits positive or negative affect depends on how the event relates to an individual’s goals. An event that leads (closer) to the achievement of one’s goal will induce positive affect, while an event that endangers or hinders goal achievement will lead to negative affect (Carver, 2004; Frijda, 1988). In accordance with the functional approach to emotions (e.g., Thompson, 1994), both positive and negative affect is regarded as serving a regulatory function in that it organizes behavior (e.g., Cole & Deater-Deckard, 2009; Gratz & Roemer, 2004; Stams, Juffer, & van IJzendoorn, 2002). Affect helps the individual to appraise and deal with daily events (Cole & Hall, 2008). At the same time, affect is regarded as inherently (to be) regulated. That is, humans are generally able to regulate both their internal affective states and their associated behavioral reactions (Cole & Hall, 2008) in the service of long-term goals (e.g., the intensity of negative affect in response to an insult can be down-regulated, in order not to act aggressively if a long-term goal is the maintenance of a positive long-term social relationship with the person who insulted). Leaving from the broad definition of affect regulation as the modulation of emotional responses (i.e., changing the intensity, duration or valence of an affective response), affect dysregulation refers to maladaptive patterns of affect regulation, that is, to patterns of affect
regulation that are costly in the pursuit of long-term goals, for instance because they undermine the maintenance of positive social relationships, and personal well-being (Cole & Hall, 2008).

Theoretically, affect dysregulation and psychopathology are thought to be linked through the subjective experience of stress that activates regulatory responses (e.g., Bradley, 2000). If the regulatory responses are unsuccessful, the experience of stress is maintained or even exacerbated. Under high levels of stress, the individual may not be able to learn adaptive regulatory behaviors, and may instead engage in dysfunctional behaviors to alleviate distress. Combined, the subjective experience of distress and dysfunctional behaviors may result in symptoms of mental pathology, or, if severe or continued in disorders. Consequently, psychopathology is regarded from a dynamic regulatory perspective, stressing the function of psychopathologic symptoms as (maladaptive) coping strategies (Hayes, Wilson, Gifford, Follette, & Strosahl, 1996) one engages in to deal with one’s affective experiences. In addition to negative affect experienced during stress, positive affect may have to be regulated, too. Positive affect is associated with feelings of interest, energy, and confidence, feelings which are clearly important for continued efforts to achieve a goal (e.g., Watson & Clark, 1997). Consequently, if one manages to upregulate the experience of positive affect, even in the face of adversity, one is better able to deal with obstacles. It should be mentioned, that sometimes positive affect may have to be down-regulated as well, for instance when infatuation keeps interfering with work one needs to concentrate on.

Recently, research on affect dysregulation and its association with psychopathology has increased rapidly (see for instance Southam-Gerow & Kendall, 2002), and some of these studies have focused on adolescence. Consequently, diverse indices of affect dysregulation have been linked to psychopathology in adolescents. Cross-sectional studies have linked high levels and variability of negative emotions to symptoms of depression (Larson, Raffaelli, Richards, Ham, & Jewell, 1990; Silk et al., 2003), and externalizing problems in adolescents (Silk et al., 2003). Additionally, depressive symptoms in adolescents’ are associated cross-sectionally with maladaptive affect regulation strategies (Yap, Allen, & Ladouceur, 2008). Nevertheless, compared to studies with children, research on affect dysregulation in adolescence remains comparatively sparse (e.g., Morris et al., 2007; Zeman et al., 2006). One likely reason for this relative lack of research on affect dysregulation in adolescents (despite its clear clinical significance) may be the limited number of available measures of affect dysregulation for adolescents (Zeman et al., 2006).

Affect is influenced by, and influences several domains of functioning, including biological (e.g., the functioning of the autonomic nervous system), cognitive, and behavioral processes (Cole, Martin, & Dennis, 2004; Thompson, Lewis, & Calkins, 2008). Consequently, affect regulation and dysregulation may also be apparent at different levels of experience and cognition, including the dynamics of affect (its intensity and variability; Silk et al., 2003), affect regulation strategies (e.g., distraction, cognitive reinterpretation; Gross & Thompson, 2007), and meta-affective experiences (e.g., nonacceptance of affective responses; Gratz & Roemer, 2004). Some go as far to maintain that the dearth of research on the development of affect regulation may in part be due to the equivocality of affect regulation and dysregulation as a concept (Cole et al., 2004).
ADOLESCENT AFFECT DYSREGULATION: INTRODUCTION

Acknowledging its multifaceted nature, the present thesis focuses on three dimensions of affect dysregulation: (1) affect dynamics representing the direct affective experience, (2) meta-affect experiences, representing the intersection of affect and cognition, and (3) impulsivity, acknowledging the close links between action and behavior (Carver, 2004), each of which have been related to psychopathology. Regarding affect dynamics, dysregulation may be reflected in heightened and prolonged negative affect and heightened variability of negative as well as positive affect. Affect dynamics are important, as they lie at the core of the affective experience, serving as inputs for regulatory attempts, and reflecting their outcome at the same time. At the meta-cognitive level, affect dysregulation may be reflected by perceived difficulties regarding several of its aspects including the clarity of affective experiences, the non-acceptance of affective responses, and low affect-regulation self-efficacy, each of which may indicate increased risk for psychopathology (Bradley, 2000). Impulsivity, the “predisposition toward rapid, unplanned reactions to internal or external stimuli …” (Moeller, Barratt, Dougherty, Schmitz, & Swann, 2001, p. 1784) can be regarded as a failure to regulate the behavioral response ‘given in’ by the action-readiness component of affect, and has been associated especially with externalizing problems such as aggression and delinquency (e.g., Loeber, 1990), but also with internalizing problems (Carver, Johnson, and Joormann, 2008). This study will explore the relation between each of these dimensions of affect dysregulation with adolescent psychopathology.

Affect Dysregulation and Psychopathology: General or Specific Associations?

As evident in conceptualizations of mental disorders as described in the DSM-IV, it is generally accepted that individuals with diverse forms of psychopathology evidence heightened levels of negative affect. However, what is needed now, is greater specificity of links between patterns of affective dysregulation and distinct forms of psychopathology (Cole & Deater-Deckard, 2009). On the level of emotion dynamics, ‘functional continuity’ between discrete emotions (e.g., sadness, anger) and specific forms of psychopathology (e.g., depression, conduct problems) is often assumed (e.g., Cole & Hall, 2008; Malatesta & Wilson, 1988; Muris & Ollendick, 2005; Rothbart & Bates, 2006). That is, patterns of affective responding that have become consolidated over time are thought to lead to specific forms of psychopathology (Zahn-Waxler, Klimes-Dougan, & Slattery, 2000). Accordingly, individuals who are often fearful are considered to be more likely to develop anxiety-related than other psychological disorders, while individuals who are easily angered are more likely to display symptoms of disruptive behavior disorders (e.g., Muris & Ollendick, 2005). However, empirical evidence for specific links between affect dynamics and forms of psychopathology in adolescence is rather mixed and may heavily depend on the method used to assess emotions (e.g., observations [Keltner, Moffitt, & Stouthamer-Loeber, 1995] versus self-report [Larson et al., 1990; Silk et al., 2003).

Indeed, a non-specific emotion dysregulation factor, affecting dysregulation in all discrete emotions alike has been proposed as a correlate of internalizing and externalizing psychopathology (Silk et al., 2003). It might well be that the dynamics of discrete emotions are associated with
psychopathology in non-specific ways, while affect dysregulation at the meta-cognitive level, as described above, relates more specifically to diverse forms of psychopathology. For instance, one might expect that the non-acceptance of affective responses (in general, not just non-acceptance of a specific discrete emotion) relates more strongly to depression than to aggressive behavior, while a lack of emotional awareness associates specifically with delinquent behavior (Herpertz, Werth, Lukas, Qunaibi, Schuerkens, Kunert et al., 2001).

The present thesis will study the specificity of associations between the dynamics of discrete emotions and psychopathology, as well as between different dimensions of affect dysregulation at the meta-cognitive level and diverse forms of psychopathology.

Affect Dysregulation in the Context of the Parent-Adolescent Relationship

Regardless of whether in general or specific ways, it is clear that affect dysregulation is a clinically significant construct (e.g., Gratz & Roemer, 2004). Therefore, a vital question regards its origins. While clearly in part genetically influenced (e.g., Hariri & Forbes, 2007), many researchers agree that affect regulation and dysregulation are closely linked to, or originate from, suboptimal parent-child relationships (e.g., Kopp, 1989; Morris et al., 2007; Zeman et al., 2006), and affect dysregulation is indeed often observed within problematic family environments (Morris et al., 2007). The relationship context is important for affective dysregulation for two main reasons: first, many of the most intense affective experiences are evoked during social interactions, especially with interaction partners that one feels close to such as family members (Bowlby, 1980), and secondly, because one also learns strategies for dealing with affective experiences in close social relationships, primarily in the parent-child relationship (Kopp, 1989; Morris et al., 2007). In addition, given the special nature of the parent-child relationship, both parenting behaviors and the quality of the parent-child relationship resulting from repeated parent-child interactions may impact adolescents’ affective experiences and regulation. Below, I will first discuss associations between relationship quality and affective experiences and affect (dys)regulation, and then turn to links between parenting, affective experiences and affect (dys)regulation.

Regarding close social relationships as sources of affective experiences, empirical evidence shows consistently that positive affect is associated with increases in belonging (e.g., reconciliation after a fight), while negative affect is linked with decreases in belonging (e.g., when having an altercation with or loosing someone dear) (Baumeister & Leary, 1995). In adolescence specifically, intense affect is experienced within the context of parent-child interactions (Collins & Laursen, 2006). Thus, regarding affect and its (dys)regulation, both warmth, support, and acceptance on the one hand, and conflict on the other hand, are important aspects of close social relationships. The experience of a warm, accepting and supportive relationship is associated with the experience of positive affect (Baumeister & Leary, 1995) and a sense of emotional security (Bowlby, 1969; Cummings & Davies, 1996). Felt security reduces wariness giving space for unrestricted exploration and consequent competence development (Bretherton, 1985). Moreover, warm and trusting relationships in which one feels emotionally secure, offer good opportunities for learning
how to deal with emotions, for instance via modeling, discussion of emotional experiences, or direct instruction (e.g., Morris et al., 2007). Conversely, relationships characterized by high levels of conflict lead to the experience of elevated levels of negative affect, such as anger, sadness, or anxiety. Highly conflictual interactions between adolescents and parents also likely preclude the learning of adaptive strategies for the regulation of affect, for instance because negative affect continues to rise and the conflict escalates, thereby blocking the exploration of alternative ways for regulating the interaction and associated emotions. Given the inherently dyadic nature of the parent-child relationship, it should be mentioned that relationship quality and adolescent affect dysregulation are likely linked bidirectionally: High levels of negative affect and high affective reactivity in the adolescent may cause irritation and negative affect in the parent, leading to a less positive evaluation of the relationship by both parent and child.

In addition to dyadic relationship aspects, such as warmth and conflict, parenting behaviors may also impact adolescent affective experiences and regulation. Given that a developmental task of adolescence is the achievement of autonomy, an important parenting construct in adolescence is parental control, in the form of behavioral as well as psychological control (Barber, 1996; Barber & Harmon, 2002; Silk, Morris, Kayana, & Steinberg, 2003). Behavioral control is aimed at controlling the adolescent’s actions (e.g., when and how to clean his room) while psychological control is aimed at controlling the adolescent’s inner world, that is at what he is feeling and thinking. Associations between behavioral control and affect dysregulation may be u-shaped, with optimal levels providing a safe environment in which one can deal with one’s affect. Effects of parental control may also depend on child characteristics: highly impulsive adolescents may profit from higher levels of parental control than their less impulsive peers. Parental psychological control likely interferes with adolescent affect regulation by precluding possibilities for the child to freely express emotions and to learn to be accepting of emotional responses. Again, links between adolescent affect dysregulation and parenting are likely bidirectional. For instance, adolescents who are highly impulsive and emotionally reactive may be harder to control than their less impulsive peers.

Taken together, it is clear that the quality of parent-child interactions, be it in the relationship or the parenting context, may both support a child’s affect regulation competencies, or place it at risk for the development of maladaptive patterns of affect regulation (Cole & Deater-Deckard, 2009). The present thesis investigated in how far the quality of parent-adolescent relations and parenting still provide an important context for affect regulation and dysregulation in adolescence.

Parent-Adolescent Relationship and Adolescent Psychopathology

Diverse family factors have been associated repeatedly with child/adolescent psychopathology, including attachment, parenting styles, and family relationship quality (see for instance Cummings, Davies, & Campbell, 2000). In spite of the large number of family factors linked to child/adolescent outcomes, several questions remain. In particular, the directionality of
effects is not entirely clear: although cross-sectional associations have often been replicated, longitudinal links seem less robust (for reviews, see Bögels & Brechman-Toussaint, 2006, for child anxiety; Rothbaum & Weisz, 2004 or Wamboldt & Wamboldt, 2000, for child externalizing problems). Empirical evidence has been found for parent-driven effects (Burt, McGue, Iacono, & Krueger, 2006; Rueter, Scaramella, Wallace, & Conger, 1999; Williams, Conger, & Blozis, 2007, child-driven effects (Anderson, Lytton, & Romney, 1986), and bidirectional associations (Burt, McGue, Krueger, & Iacono, 2005; Richmond & Stocker, 2008). However, some studies also report only cross-sectional, but no longitudinal associations (Vuchinich, Bank, & Patterson, 1992). One possible explanation for the mixed results is that parent-adolescent relationships might not influence adolescent mental health directly, but indirectly, for instance via adolescent emotional processes. In addition, the influence of parent-adolescent relationship quality on adolescent development, may interact with child- (e.g., affect dysregulation) and contextual (family, school, neighborhood factors). Each of these possibilities is discussed in more detail below.

Parent-Adolescent Relationship, Adolescent Affective Dysregulation and Psychopathology

Both contextual and individual risk factors are thought to add to the development of psychopathology, at least in part, through their impact on an individual’s self-regulation (Cole & Deater-Deckard, 2009). As affective dysregulation is regarded as a core component of most forms of psychopathology, and affective dysregulation is thought to be impacted by adverse social experiences, it has repeatedly been hypothesized as one possible mechanism in links between family factors and psychopathology (Beauchaine et al., 2007; Cole, Michel, & Teti, 1994; Cummings, Schermerhorn, Davies, Goeke-Morey, & Cummings, 2006; Maughan & Cicchetti, 2002; Morris et al., 2007; Yap, Allen, & Sheeber, 2007), and between the parent-adolescent relationship and adolescent psychopathology in particular.

Research has provided some support for the mediating role of emotion dysregulation in links between social experiences and mental health problems in children. For instance, Maughan and Cicchetti (2002) identified child emotion regulation abilities as a mediating variable in links between maltreatment and socioemotional adjustment in a sample of 4-6 year-olds. Also, the effects of parental warmth on child externalizing problems have been shown to be partly indirect through child emotion dysregulation (Eisenberg, Losoya, Fabes, Guthrie, Reiser, Murphy et al., 2001).

At the same time, positive parent-adolescent interactions may be conceptualized as a protective factor against child affective characteristics that may otherwise predispose them to internalizing or externalizing problems, such as heightened affective reactivity and high impulsivity. For instance, conceivably, adequate levels of behavioral control may attenuate the association between high impulsivity and externalizing problems.

In sum, interactions in the parent-adolescent relationship and adolescent affective dysregulation may be associated with adolescent psychopathology in additive, mediating, or
moderating ways. The present thesis explored several ways in which indices of affect dysregulation and parent-adolescent interactions combine to influence adolescent development.

The Broader Social Context

As emphasized by a number of researchers (e.g., Sameroff, 2010), and most notably in Bronfenbrenner's bioecological model (e.g., Bronfenbrenner, 1986) the development of youths and their families does not take place in a vacuum, but is impacted by the broader social context as well. Factors indexing family adversity, such as single parenthood and low socioeconomic status have consistently been associated with the development of psychopathology in children and adolescents (e.g., Amato, 2000; Loeber & Stouthamer-Loeber, 1986). For adolescents, who increasingly spend time outside the home and the direct supervision of their parents, neighborhood risk may gain in importance for socio-emotional development (Leventhal & Brooks-Gunn, 2000). Family and neighborhood level risk may impact youth development directly, as well as indirectly, for instance through decreasing the quality of family relationships and parenting (e.g., Kohen, Leventhal, Dahinten, & McIntosh, 2008; Mrug & Windle, 2009). In addition, theoretical formulations, such as the differential susceptibility hypothesis (Belsky & Pluess, 2009; Pluess & Belsky, 2010) highlight that the impact of environmental adversity on development is not the same for everyone, but depends on individual difference characteristics, such as temperament and emotionality. For instance, the association between living in disadvantaged neighborhoods and antisocial behavior, has been shown to be moderated by levels of youth impulsivity (Lynam, Caspi, Moffitt, Wikström, Loeber, & Novak, 2000; Meier, Slutske, Arndt, & Cadoret, 2008; though not all studies have found such interactive effects e.g., Vazsonyi, Cleveland, & Wiebe, 2006).

The Present Thesis

The existing literature provides substantial evidence that affective dysregulation is associated with most, if not all, forms of psychopathology. Additionally, there is evidence that the development of affect regulation and dysregulation is closely linked to experiences in the parent-child relationship, at least for younger children. Consequently, affect dysregulation has often been hypothesized as an explanatory mechanism in associations between the parent-child relationship and child internalizing and externalizing problems, and there is some evidence for this hypothesis, at least for children. Finally, it is clear that individual risk factors, such as affective dysregulation, play a role in individual development in concert with contextual risk factors, such as family and neighborhood adversity. However, especially for adolescence, longitudinal studies of the relation between affective dysregulation and psychopathology are sorely needed to shed light on the precise nature of this association. Do affective dysregulation and symptoms of psychopathology simply co-occur, or does affective dysregulation actually underlie the development and persistence of internalizing and externalizing problems? Regarding the link between affect dysregulation and psychopathology, it is also not clear whether dysregulation in specific emotions, and/or specific
forms of dysregulation, underlies specific forms of psychopathology, or whether affective dysregulation is better described as a general vulnerability factor for the development of psychosocial problems. Further, empirical evidence for links between the parent-adolescent relationship and adolescent affective dysregulation is scarce, and longitudinal studies on these links are missing. Finally, while it is well known that individual and contextual risk interact in the prediction of individual development, the precise nature of the interplay of individual characteristics with contextual (family and neighborhood) adversity remains poorly understood. However, it is important to get a better grip on the role of adolescent affective dysregulation in adolescent psychopathology, and its potential origins, since self-regulation of affect is a factor that is modifiable by therapeutic efforts (Bradley, 2000; Thompson, Lewis, & Calkins, 2008) and, successful therapeutic effects are likely to show their effects in many fields of psychosocial well-being and functioning (all social relationships, school, work).

**Goals of the Present Thesis**

The main goal of the present thesis is to study affect dysregulation in adolescence, as related to the development of internalizing and externalizing problems, and address the role of the parent-adolescent relationship and broader contextual factors in this relation. Given the paucity of research on the origins and consequences of affect dysregulation in adolescence, specific aims are to:

1. Study links between adolescent affect dysregulation, in the rather ‘basic’ form of emotional dynamics (level and variability of experienced emotions), and the metacognitive level of self-perceived emotion regulation difficulties, as an underlying personal risk factor for the development of psychopathology from early to mid adolescence. Special attention will be paid to generality versus specificity of links between different forms of affect dysregulation and forms of psychopathology.

2. Study the potential role of parents for adolescent affective dysregulation and adolescent psychopathology: Specific questions will be:
   a. Is adolescent affective dysregulation related to the quality of the parent-adolescent relationship?
   b. Does parent-adolescent relationship quality affect the development of internalizing and externalizing problems directly or indirectly through its effects on adolescents’ affect regulation?

3. Study the role of the broader social context in links between affective dysregulation, the parent-adolescent relationship and the development of psychopathology. Attention will be paid to family (e.g., single parent) as well as neighborhood (e.g., economic disadvantage) adversity.
Figure 1.1. General model of the impact of social and emotional difficulties on adolescent psychopathology.
CHAPTER 1

Design of the Study

Five studies, using four different samples, were performed to explore the aims outlined above. Studies 1 and 2 focus on the first specific aim of the present thesis; that is the establishment of links between different forms of affect dysregulation and psychopathology. Study 3 addresses the second goal, the question of links between the parent-adolescent relationship quality and parental control and adolescent affect dysregulation. Studies 4 and 5 focus on the interplay of affect dysregulation, and the parent-adolescent relationship as related to the development of psychopathology. Additionally, study 5 takes the broader family and neighborhood context into consideration. Study 1 uses a cross-sectional sample of 870 Dutch adolescents aged 11-17 years. Study 2 employs data from another sample of 452 Dutch adolescents followed longitudinally from age 13 to age 14 years. Study 3 makes use of a cross-sectional sample of 463 German 11-19 year olds. Study 4 uses the same sample of Dutch adolescents as is used in study 2; however, adolescents are now followed from age 13 to age 15, and data from the adolescents’ mothers and fathers are included as well. Finally, study 5 uses a sample of 4,597 Scottish adolescents from Edinburgh, followed from age 12 to age 15. An overview of the samples and measures used in each study is provided in Table 1.1.

Outline of the Present Thesis

The first two chapters of the present thesis aim at establishing links between emotion dysregulation and adolescent psychopathology in adolescence. Chapter 1 focuses on the assessment of perceived emotion regulation difficulties in male and female adolescents, and how they relate to self-reported internalizing (anxiety, depression) and externalizing (aggressive behavior, delinquent behavior) problems. Chapter 2 explores adolescent emotion dynamics (level and variability of happiness, anger, anxiety, and sadness) in the 1-year continuity of adolescent anxiety disorders symptoms, depression, and aggressive behavior. Chapter 4 explores links between emotion regulation difficulties and the parent-adolescent relationship. Having established associations between emotion dysregulation and adolescent psychopathology in chapters 2 and 3, and between the parent-adolescent relationship and emotion dysregulation in chapter 4, chapter 5 addresses the potential indirect role of emotion dysregulation in hypothesized links between the parent-adolescent relationship and adolescent psychopathology (generalized anxiety disorder symptoms, physical aggression). Finally, chapter 6 aims at illustrating the complex interplay of personal and family risk and the broader social context in the development of adolescent antisocial behavior.
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Table 1.1
*Overview of Study Designs, Samples, and Measures used in Chapters 2-6*