DEPARTMENT OF PSYCHOLOGY

PARENT CONTROL AND PARENT-ADOLESCENT CONFLICT AS PARAMETERS OF EXTERNALIZING AND INTERNALIZING BEHAVIORS: INVESTIGATING THE MODERATING EFFECTS OF ADOLESCENTS' PSYCHOPATHIC TRAITS

DOCTOR OF PHILOSOPHY DISSERTATION

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Parent control and parent-adolescent conflict as parameters of externalizing and internalizing behaviors: Investigating the moderating effects of adolescents' psychopathic traits

SYMEOU, MARIA

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The present doctoral dissertation was submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy of the University of Cyprus. It is a product of original work of my own, unless otherwise mentioned through references, notes, or any other statements.

Maria Symeou

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It took a long way to get from “there” to “here”. It took a while. But this “here” was only reached because some people were there *for* me and *with* me, helping me, at times disappointing me, but always encouraging me. And for this, I feel the need to thank them. First and foremost, I am heartily thankful to my supervisor, Dr. Stelios Georgiou, whose guidance, support, and excellent supervision empowered me to break out of my comfort zone, think outside the box, and develop a greater understanding of the subject. I also wish to acknowledge the valuable and constructive suggestions provided by Dr. Panayiotis Stavrinides during the planning and development of my research work. Additionally, I would like to express my very great appreciation to Dr. Michalis Michaelides; his willingness to give his time so generously for advice and guidance is greatly appreciated. I am particularly grateful to all (= adolescent students, as well as both their fathers and mothers) who participated in the study; without their participation, this thesis would not have been possible. Finally, and above all, I am deeply grateful to my family. Words cannot express how thankful I am to my wonderful parents for their unconditional, undying love, and for all the sacrifices they‘ve made to help me fulfill my dreams, and to my amazing husband, Simos, who has constantly encouraged me towards excellence, and who was remarkably patient and supportive throughout this journey of five years.

Σα βγεις στον πηγαιμό για την Ιθάκη,
να εύχεσαι νάναι μακρύς ο δρόμος,
γεμάτος περιπέτειες, γεμάτος γνώσεις...

... Πάντα στον νου σου νάχεις την Ιθάκη.
Το φθάσιμον εκεί είν' ο προορισμός σου.
Αλλά μη βιάζεις το ταξείδι διόλου.
Καλλίτερα χρόνια πολλά να διαρκέσει·
και γέρος πια ν' αράξεις στο νησί,
πλούσιος με όσα κέρδισες στον δρόμο,
μη προσδοκώντας πλούτη να σε δώσει η Ιθάκη.

Η Ιθάκη σ' έδωσε τ' ωραίο ταξείδι.
Χωρίς αυτήν δεν θάβγαινες στον δρόμο.
Άλλα δεν έχει να σε δώσει πια.

Κι αν πτωχική την βρεις, η Ιθάκη δεν σε γέλασε.
Έτσι σοφός που έγινες, με τόση πείρα,
ήδη θα το κατάλαβες η Ιθάκες τι σημαίνουν.

Κ. Π. Καβάφης – Ιθάκη

Στο «χθες», το «σήμερα», και το «αύριο» μου
Για σένα μητέρα, για σένα πατέρα
Για σένα, αγάπη μου...

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ABSTRACT [GREEK]

Η παρούσα διατριβή αφορά την διερεύνηση του αντίκτυπου της σχέσης ανάμεσα σε γονεϊκούς παράγοντες και προσωπικά χαρακτηριστικά στην εμφάνιση εξωτερικευμένων και εσωτερικευμένων συμπεριφορών. Επίσης, η έρευνα έχει σκοπό να εξετάσει το ρυθμιστικό ρόλο των ψυχοπαθητικών χαρακτηριστικών των εφήβων (= callous-unemotional traits, ναρκισσισμός και παρορμητικότητα) στη σχέση μεταξύ γονεϊκού ελέγχου, σύγκρουσης γονέα-εφήβου, και των εξωτερικευμένων και εσωτερικευμένων συμπεριφορών. Διερευνήθηκε, ακόμη, η παρορμητικότητα τόσο με τη χρήση ποσοτικών μετρήσεων όσο και μέσω συμπεριφορικών τεστ, προκειμένου να εξεταστούν πιθανές διαφορές ανάμεσα σε ομάδες όσον αφορά τα επίπεδα εμφάνισης της συμπεριφοράς αυτής. Παράλληλα, διερευνήθηκε αναλυτικότερα ο ρυθμιστικός ρόλος της παρορμητικότητας στη σχέση μεταξύ των γονεϊκών παραγόντων και εξωτερικευμένων και εσωτερικευμένων συμπεριφορών. Προς εξέταση των πιο πάνω ερωτημάτων, η παρούσα μελέτη έγινε σε δύο φάσεις. Στη πρώτη φάση οι συμμετέχοντες έλαβαν μέρος σε ποσοτικές μετρήσεις, ενώ, στη δεύτερη φάση, ένα στρωματοποιημένο δείγμα εφήβων επιλέχθηκε να λάβει μέρος σε συμπεριφορικά τεστ μέτρησης της παρορμητικότητας. Η πρώτη φάση της έρευνας περιελάμβανε 538 εφήβους και τους γονείς τους. Συνολικά, 513 μητέρες και 464 πατέρες συμμετείχαν στην έρευνα. Οι έφηβοι συμπλήρωσαν το Youth Psychopathic Traits Inventory (YPI), και το Children's Report on Parent Behavior Inventory (CRPBI), ενώ οι γονείς συμπλήρωσαν την υποκλίμακα σύγκρουσης του Child-Parent Relationship Scale (CPRS), και το Child Behavior Checklist – Parent Report (CBCL). Η δεύτερη φάση της έρευνας περιλάμβανε 36 εφήβους, οι οποίοι αναγνωρίστηκαν, μέσα από στατιστικές αναλύσεις κατά την πρώτη φάση, ως ακραίες περιπτώσεις όσον αφορά την έκθεσή τους σε εξωτερικευμένες και εσωτερικευμένες συμπεριφορές. Η ομάδα με εξωτερικευμένες συμπεριφορές

αποτελείτο από 18 έφηβους, εκ των οποίων 9 μαθητές εμφάνιζαν αυξημένες εξωτερικευμένες συμπεριφορές και 9 μαθητές εμφάνιζαν χαμηλές εξωτερικευμένες συμπεριφορές. Αντίστοιχα, η ομάδα με εσωτερικευμένες συμπεριφορές αποτελείτο επίσης από 18 έφηβους, εκ των οποίων 9 μαθητές εμφάνιζαν αυξημένες εσωτερικευμένες συμπεριφορές και 9 μαθητές εμφάνιζαν χαμηλές εσωτερικευμένες συμπεριφορές. Οι 36 συμμετέχοντες συμπλήρωσαν το Self-Rated Dysexecutive Questionnaire (DEX), καθώς επίσης και το Youth Self-Report (YSR). Επιπλέον, οι έφηβοι συμπλήρωσαν δύο συμπεριφορικά τεστ μέτρησης της παρορμητικότητας – το GoStop Impulsivity Paradigm, και το Two Choice Impulsivity Paradigm. Τα αποτελέσματα της πρώτης φάσης έδειξαν ότι συγκεκριμένες γονεϊκές πρακτικές, καθώς και συγκεκριμένα προσωπικά χαρακτηριστικά, σχετίζονται τόσο με τις εξωτερικευμένες όσο και με τις εσωτερικευμένες συμπεριφορές. Συγκεκριμένα, η χρήση ψυχολογικού ελέγχου, η σύγκρουση γονέα-εφήβου και η παρορμητικότητα, προβλέπουν θετικά τις εξωτερικευμένες συμπεριφορές. Παράλληλα, η χρήση ψυχολογικού ελέγχου και η σύγκρουση γονέων-εφήβων προβλέπουν θετικά και τις εσωτερικευμένες συμπεριφορές. Επιπλέον, η σχέση μεταξύ συγκεκριμένων όψεων της γονικότητας και των εξωτερικευμένων και εσωτερικευμένων συμπεριφορών ρυθμίζεται από τα ψυχοπαθητικά χαρακτηριστικά των εφήβων. Συγκεκριμένα, τα αποτελέσματα έδειξαν ότι τα C-U traits ρυθμίζουν τη σχέση μεταξύ: Του μητρικού ψυχολογικού ελέγχου και εξωτερικευμένων συμπεριφορών (μόνο για τα κορίτσια), της σύγκρουσης πατέρα-έφηβου και εξωτερικευμένων συμπεριφορών, και της σύγκρουσης πατέρα-εφήβου και εσωτερικευμένων συμπεριφορών (μόνο για τα κορίτσια). Παρομοίως, ο ναρκισσισμός ρύθμιζε τη σχέση μεταξύ του πατρικού ψυχολογικού ελέγχου και των εσωτερικευμένων συμπεριφορών (μόνο για τα κορίτσια) και η παρορμητικότητα ρύθμιζε τη σχέση μεταξύ σύγκρουσης μητέρας-εφήβου και εξωτερικευμένων συμπεριφορών (μόνο για τα

αγόρια). Περαιτέρω αναλύσεις δεδομένων κατέδειξαν διαφορές ανάμεσα σε ομάδες. Αξιοσημείωτο ήταν το αποτέλεσμα ότι έφηβοι που εμφάνιζαν είτε υψηλά είτε χαμηλά επίπεδα εξωτερικευμένων συμπεριφορών, διέφεραν μεταξύ τους όσον αφορά τα επίπεδα των ψυχοπαθητικών χαρακτηριστικών τους. Συγκεκριμένα, τα ποσοστά των C-U traits, ναρκισσισμού και παρορμητικότητας ήταν στατιστικά υψηλότερα στους έφηβους με υψηλά ποσοστά εξωτερικευμένων συμπεριφορών. Επειδή η παρορμητικότητα θα εξεταζόταν περαιτέρω στη δεύτερη φάση της έρευνας, θεωρήθηκε σημαντικό όπως μελετηθούν, επίσης, οι διαφορές ανάμεσα στις υποομάδες σε σχέση και με τις τρεις υποκλίμακες της παρορμητικότητας (όπως μετρούνται μέσω του YPI). Τα αποτελέσματα έδειξαν ότι πράγματι υπήρχαν διαφορές ανάμεσα στις δύο υποομάδες σε όλες τις μετρήσεις. Τα αποτελέσματα της δεύτερης φάσης της έρευνας κατέδειξαν σημαντικά ευρήματα. Βρέθηκε ότι η σχέση μεταξύ συγκεκριμένων όψεων της γονικότητας και των εξωτερικευμένων και εσωτερικευμένων συμπεριφορών ρυθμίζεται από την παρορμητική συμπεριφορά των εφήβων. Πιο συγκεκριμένα, η παρορμητικότητα ρύθμιζε τη σχέση μεταξύ του πατρικού ψυχολογικού ελέγχου και εξωτερικευμένων συμπεριφορών, της σύγκρουσης μητέρας-εφήβου και εσωτερικευμένων συμπεριφορών, καθώς και του πατρικού συμπεριφορικού ελέγχου και εσωτερικευμένων συμπεριφορών. Διερεύνηση των διαφορών ανάμεσα στις υποομάδες, σε σχέση με τα επίπεδα παρορμητικότητας, δεν έχει καταδείξει στατιστικά σημαντικά αποτελέσματα. Σε αντίθεση με τα ευρήματα από την πρώτη φάση της έρευνας, τα επίπεδα παρορμητικότητας δεν ήταν στατιστικά διαφορετικά ανάμεσα στους έφηβους που εμφάνιζαν υψηλά ποσοστά εξωτερικευμένων συμπεριφορών και της ομάδας ελέγχου. Τα αποτελέσματα της έρευνας συζητούνται σε σχέση με τη σύνδεση τους με προηγούμενες έρευνες, τη θεωρητική τους συνεισφορά και τις πρακτικές εφαρμογές τους.

ABSTRACT [ENGLISH]

The aims of the present study were to explore the impact of parental and personal characteristics on adolescent's expression of externalizing and internalizing behaviors, as well as, to examine the way that adolescents' psychopathic traits (= callous-unemotional traits, narcissism, and impulsivity) moderate the relationship between parent control, parent-adolescent conflict, and the development of externalizing and internalizing behaviors. Additionally, one psychopathic trait, namely impulsivity, was explored using both quantitative and behavioural measures, in order to examine group differences in the levels of impulsive behaviour, as well as, to further explore the moderation role of impulsivity on the relationship between parental factors and behaviour difficulties. To address these questions, the present study was comprised of two phases: phase one, wherein participants completed quantitative measures, and phase two, wherein a stratified sample of adolescent participants was selected to complete behavioral measures of impulsivity. The first phase of the study included 538 adolescents and their mothers and fathers. Overall, 513 mothers and 464 fathers participated in the study. Adolescents completed the Youth Psychopathic Traits Inventory (YPI), and the Children's Report on Parent Behavior Inventory (CRPBI), while parents completed the conflict subscale of the Child-Parent Relationship Scale (CPRS), as well as, the Child Behavior Checklist – Parent Report (Short Form; CBCL). The second phase of the study included 36 adolescents who had been identified from the first phase of the study and through statistical calculations as extreme cases in terms of their exhibition of externalizing and internalizing behaviors. In total, 18 adolescents were included in the externalizing behaviors group (9 students displayed low externalizing behaviors and 9 students displayed high externalizing behaviors), and 18 adolescents were included in the internalizing behaviors group (9 students displayed low

internalizing behaviors and 9 students displayed high internalizing behaviors). The 36 participants completed the Self-Rated Dysexecutive Questionnaire (DEX), and the Youth Self-Report (Short Form; YSR). Additionally, adolescents completed two behavioral measures of impulsivity; the GoStop Impulsivity Paradigm, and the Two Choice Impulsivity Paradigm. Results of the first phase of the study showed that certain parental practices and personal characteristics are related to externalizing and internalizing behaviors. Specifically, psychological control, parent-adolescent conflict, and impulsivity positively predicted externalizing behaviors, whereas psychological control and parent-adolescent conflict positively predicted internalizing behaviors. Furthermore, the relationship between certain aspects of parenting and externalizing and internalizing behaviors was moderated by adolescent's psychopathic traits. The results showed that C-U traits moderated the relationship between mother psychological control and externalizing behaviors (for girls only), father-adolescent conflict and externalizing behaviors, and father-adolescent conflict and internalizing behaviors (for girls only). Likewise, narcissism moderated the relationship between father psychological control and internalizing behaviors (for girls only), and finally, impulsivity moderated the relationship between mother-adolescent conflict and externalizing behaviors (for boys only). Further data analyses demonstrated a number of group differences; of particular interest were the findings that adolescents who displayed either high or low externalizing behaviors differed in their levels of psychopathic traits; specifically, adolescents in the high externalizing behaviors group scored considerably higher in the callous-unemotional, narcissistic, and impulsive dimensions than adolescents in the low externalizing behaviors group. As impulsivity would be further explored in the second phase of the study, differences between the two subgroups in regards to the three subscales of impulsivity (= thrill-seeking, irresponsibility, and

impulsiveness, as measured through the YPI) were examined, and results indicated that there were, indeed, differences between the two subgroups in all test measures, with the high externalizing behaviors subgroup scoring considerably higher in all three subscales. Results of the second phase of the study further demonstrated the moderation role of impulsivity in the relationship between parental control, parent-adolescent conflict, and externalizing and internalizing behaviors; more specifically, impulsivity moderated the relationships between father psychological control and externalizing behaviors, mother-adolescent conflict and internalizing behaviors, and father behavior control and internalizing behaviors. Nevertheless, examination of group differences in the levels of impulsivity for adolescents who displayed either low or high externalizing and internalizing behaviors has not yielded significant findings. In other words, in contrast to the findings from the first phase of the study, levels of impulsivity were not significantly different between adolescents who exhibited high externalizing behaviors and the control group. Even though the results from the two phases of the study are not in agreement, this is not an uncommon finding. The results are discussed in relation to the connection with earlier studies, the theoretical contribution, and the implications in applied settings.

1. CHAPTER 1 – INTRODUCTION

1.1. Statement of the problem

Adolescence is generally considered as a period in life wherein numerous changes take place in the lives of children, and the physical, behavioral, and mental changes that come with adolescence can be an overwhelming experience for the young person and other individuals from his close social environment. It is a turbulent period wherein body changes take place, adolescents struggle to fit in with peers, and their sexual desires develop. One other notable change during the adolescent period is the increase in the prevalence of externalizing and internalizing problems (cited in Fanti et al., 2008; Risper, 2012). According to Risper (2012), 15 – 18 year-old adolescents reported higher rule-breaking behavior, anxiety/depression, somatic complains, and attention problems than 11 – 14 year-old adolescents. Such behavior difficulties are of worldwide concern not only for the short-term consequences associated with these behavior difficulties for both the adolescent and his greater social environment, but for the long-term consequences as well. First, externalizing behaviors are a major risk factor for juvenile delinquency, and crime and violence in adulthood (cited in Liu, 2004), and adolescent delinquency leads to decreased educational and occupational attainment in adulthood (Tanner, Davis, & O'Grady, 1999). In the same way, adolescent depression is associated with a number of dangerous risks. In the long-term, depressed mood, which is characterized by unhappiness and negative emotions, is thought to be a predecessor to Major Depressive Disorder (MDD), a disorder in which by age nineteen about 35% and 19% of adolescent females and males, respectively, will experience at least one episode (Lewinsohn, Rohde, & Seeley, 1998). Additionally, adolescent depression is associated with a multitude of other negative outcomes, such as substance use and abuse, impaired social competence and functioning, poor academic achievement,

greater risk for suicidal behaviors or ideation during adolescence, and, increased risk of attempted suicide and completed suicide in adulthood (cited in Plunkett, Henry, Robinson, Behnke, & Falcon III, 2007). Consequently, identification of the underlying factors that contribute in the development of externalizing and internalizing problems should not be ignored as such identification has theoretical and practical significance.

It is now widely recognized that the causes of such behavior difficulties are multifactorial and all are relatively important. Among the risk factors that can influence the child's development include characteristics of the child (e.g., temperamental traits) and characteristics of the social context (e.g., negative parent rearing practices), and these two factors will be the focus of attention in the present research study.

In regards to the social context, researchers have examined a plethora of parental factors associated with the development of both externalizing and internalizing behaviors. Parental practices and parent-child relationship are among the factors that are found to contribute in the behavioral and psychosocial well-being of children and adolescents (Galambos, Barker, & Almeida, 2003; Zadeh, Jenkins, & Pepler, 2010), and the association between these ineffective parenting practices and children's behavior difficulties is now well documented (Galambos et al., 2003; Zadeh et al., 2010).

Aside from the familial and parental factors found to associate with externalizing and internalizing behaviors, researchers are increasingly interested in the way that temperamental characteristics aid in the development of these maladaptive behaviors. Among the individual characteristics found to play a significant role in the experiences of externalizing and internalizing behaviors are the adolescent's psychopathic traits (Barry & Malkin, 2010; Essau, Sasagawa, & Frick, 2006; Kerig & Stellwagen, 2009).

It is, therefore, widely acknowledged now that such behavior difficulties cannot be understood solely through the explanation of a single factor, for example either through

only familial factors or temperamental factors, or through a mainly direct relationship between the factors of interest; in contrast, it is now understood and accepted that the causes of externalizing and internalizing behaviors can be multifactorial, and that the path of relationship between the variables of interest can be direct or indirect.

The main research question of the present study is to identify the personal and parent variables that may contribute to adolescent's exhibition of externalizing and internalizing behaviors. Moderators – such as the adolescent's callous-unemotional (C-U) traits, narcissism, and impulsivity – were also included in the analysis in an attempt to better understand the relationship between the dependent and independent variables.

To explore the stated purposes of the study, there will be two phases conducted. The first phase will address the main research questions of the study. Based on the results obtained from the first phase of the study, the second – quasi-experimental – phase aims to explore in more depth the role of impulsivity, such as the moderation effect of impulsivity on the effects of parent variables, on the development of externalizing and internalizing behaviors. The rationale for the use of the second phase is to overcome the limitations of self-awareness and possible demand characteristics issues that arise with the use of quantitative measures, and to provide more concrete conclusions about such a composite variable that is impulsivity. In doing so, this will add more reliability, validity, and credibility to the findings obtained from the first phase of the study. In addition, using a multi-method assessment of such a complex trait, will bridge a relative gap in the literature wherein impulsivity is traditionally assessed only either through laboratory measures, or by parent- or self-ratings on scales of impulsivity.

Identifying the paths to which externalizing and internalizing behaviors are developed – either be direct or indirect, will constitute important methodological

avenues for future research, as well as, provide novel approaches in parent training, prevention, and intervention programmes.

1.2. Significance of the problem

Studying about adolescent psychopathology is crucial. The short-term and long-term consequences associated with these maladaptive behaviors are not to be ignored as they affect both the adolescent and individuals from his close social environment in a number of ways. Among the dangerous risks associated with the experiences of externalizing and internalizing behaviors include juvenile delinquency, crime and violence in adulthood (cited in Liu, 2004), decreased educational and occupational attainment (Tanner, Davis, & O'Grady, 1999), substance use and abuse, impaired social competence and functioning, and increased suicidal behaviors, suicidal ideation or suicidal attempts (cited in Plunkett et al., 2007).

Scholarly theories assume that a link between individual characteristics or between parenting characteristics and externalizing and internalizing behaviors exists; nonetheless, concrete conclusions about the magnitude of these links are not easy to draw. One reason for this may be that most research has traditionally focused separately on the two aspects affecting the development of externalizing and internalizing behaviors. However, according to the ecological (Bronfenbrenner, 1977) model, these factors interact in determining human development. Indeed, there is a general consensus in the field of Developmental Psychology and Developmental Psychopathology that the interplay of characteristics of the children's individuality and qualities of parental rearing practices and parent-child relationships determine adaptive or maladaptive outcomes (Kochanska, Kim, Boldt, & Eun Yoon, 2013). It seems that children can be co-participants in the emergence of coercive parent-child exchanges

and the development of behavior problems (Kochanska et al., 2013; Oxford et al., 2003). For this reason, we included personal characteristics of the adolescents as moderators in an effort to understand in greater detail if the relationship between parent-child interactions and externalizing and internalizing behavior is stronger for certain adolescents. Identifying such relationships will help advance our understanding for this social phenomenon that increases in prevalence during the adolescent period, open new horizons for future research, and will ultimately aid in the promotion of better parental rearing practices, and more successful prevention and intervention programmes.

1.3. Contribution of the study

Research on individual characteristics and parental correlates of externalizing and internalizing behaviors is of direct significance to both theory and practice. In other words, the present study will contribute to the existing literature in a number of ways, and will, also, have practical implications as well.

First, the study will explore both the direct and indirect paths through which behavior difficulties emerge. The indirect paths will be examined through the use of moderators. According to Baron and Kenny (1986) a moderator is "a qualitative or quantitative variable that affects the direction and/or strength of the relation between an independent or predictor variable and a dependent or criterion variable" (p. 1174). In other words the relationship between independent and dependent variables can change as a function of the moderator variable (Baron & Kenny, 1986). Moderators are important to be studied; they indicate *under what conditions* or *to whom* the relationship between independent and dependent variables exist. In this research study, three individual risk factors/ psychopathic traits will serve as moderators; more specifically, the moderators to be

examined will be callous-unemotional (C-U) traits, narcissism, and impulsivity. A question one might pose is how these psychopathic traits relate to parent rearing practices and to externalizing and internalizing behaviors. One explanation is that children with psychopathic traits do not respond to parenting practices the same way that children without psychopathic traits do (Edens, Skopp, & Cahill, 2008). Thus, as imperative it is to study the relative contribution of parent practices and parent-child relationship in the exhibition of adolescent's externalizing and internalizing behaviors, as imperative it also is to study the interrelations between individual and contextual characteristics.

Second, examining the direct and indirect paths through which externalizing and internalizing behavior problems emerge will provide innovative approaches in parent training programmes. For example, prevention and intervention methods may benefit from identifying the possible indirect paths through which parent practices and parent-adolescent relationship relate to externalizing and internalizing behaviors. If temperamental traits are found to moderate the relationship between the independent and dependent variables, this has far-reaching implications for how one works with adolescents displaying externalizing or internalizing behaviors. Such parent programmes could benefit by being fine-tuned to the presence of psychopathic traits in adolescents; for example traditional approaches to parenting skills training may need revision or modifications to meet the needs of parents whose adolescent children appear less responsive to recommended discipline or recommended parenting practices (Oxford et al., 2003; Plunkett et al., 2007).

A third contribution of the present research is the inclusion of fathers in the study. The few studies on the father figure indicate that paternal behaviors are significant in children's and adolescent's adjustment (e.g. Buist, Dekovic, Meeus, & van Aken, 2004;

Gryczkowski, Jordan, & Mercer, 2010). For example, according to Flouri and Buchanan, father involvement (i.e., a father who reads to his child, or shows interest in his child's education) is associated with adolescents' psychological well-being (Flouri & Buchanan, 2003) and less likelihood of being in trouble with the police (Flouri & Buchanan, 2002). Nevertheless, even though empirical interest in the father-child relationship is growing, it remains that research often neglects the influence of fathers on children's development within multiple family contexts, and so, fathers are still underrepresented in studies of child development (Schacht, Cummings, & Davies, 2009). In a recent meta-analysis (Hoeve et al., 2009), it was concluded that fewer than 20% of the studies focused on the parenting behavior of fathers, even though the effect of specific paternal parenting behaviors was larger than maternal parenting behaviors. As the amount of time that fathers dedicate to their children has increased considerably in the past decades the inclusion of fathers in parenting research is considered vital (Pleck & Masciadrelli, 2004). Consequently, in order to offer a more concrete conclusion to questions such as how *parent practices* – not simply *mother practices* – are related to the behavior difficulties of their adolescent children, it is essential to regard the role that fathers play as equally important as to that of mothers.

Lastly, the present study contributes to the existing literature by employing the quasi-experimental method to confirm and reinforce the findings of the first phase of the study regarding the moderation role of one temperamental trait, namely impulsivity. To do so, helps overcome limitations associated with the particular trait. Among the drawbacks associated with the use of quantitative measures are the self-awareness and demand characteristics issues. These are issues which biases the findings of research. Alternatively, laboratory measures are unaffected by self-awareness and demand characteristics issues. This underscores the need for multi-method assessments that

considers how the adolescent behaves in the real-world setting, otherwise, this could result in a failure to identify a problem that exists in real-world settings. The use of the quasi-experimental method serves to provide more concrete conclusions about impulsivity, which in turn, will add more reliability, validity and credibility to the findings.

1.4. Purpose of the study

Taken as a whole, the purpose of this study is to expand on previous research by investigating the direct and indirect paths through which parental and personal factors associate with adolescent's exhibition of externalizing and internalizing behaviors, by collecting – in phase one – statistical, quantitative data from adolescent students of public secondary schools as well as from their fathers and mothers. Based on the results from the first phase of the study, a stratified sampling of two groups of adolescent participants is used in phase two, to explore in greater detail the moderating effect of one specific, complex individual trait, impulsivity, through laboratory measures.

The specific aims of the present study are twofold. In the first phase of the study, the research questions aim to provide an understanding of how a series of hypothesized parental factors may influence the development of externalizing and internalizing behaviors. The three parental factors of interest for the present research study are the parental control [behavioral control, and psychological control], and parent-adolescent conflict.

However, as it is now acknowledged, certain associations may be stronger for some children. Thus, the second purpose of the study is to explore the way that adolescents' psychopathic traits moderate the relationship between parent control and parent-adolescent conflict, and the development of externalizing and internalizing behaviors. The three psychopathic traits of interest for the present research study that

will serve as moderators in the analysis are the callous-unemotional (C-U) traits, narcissism, and impulsivity.

1.5. Basic Concepts

1.5.1. Externalizing and Internalizing Behaviors

An eminent distinction in the field of Child Psychology/Psychopathology and Child Psychiatry is the differentiation between two classes of maladaptive response styles, namely “externalizing” and “internalizing” disorders (Achenbach, 1978).

Externalizing behaviors refer to a cluster of behavior problems that are manifested in children’s or adolescent’s outward behavior and reflect the child or adolescent negatively acting on the external environment (cited in Liu, 2004). In the research literature, externalizing disorders consist of rule-breaking, aggressive, and delinquent behaviors (Liu, 2004, Risper, 2012).

On the other hand, the construct of internalizing behavior problems refers to a grouping of behavior problems that are inner-directed and overcontrolled (Madigan, Atkinson, Laurin, & Benoit, 2012). In other words, internalizing behaviors mainly have an effect on the child’s or adolescent’s psychological world rather than the external world (Liu, 2004). Internalizing disorders encompass symptoms related to social isolation, withdrawal, anxiety, and depression (Madigan et al., 2012; Williams & Kelly, 2005), which often go unnoticed because they do not create a disturbance that disrupts the external environment. Nevertheless, children and adolescents suffering from either externalizing or internalizing disorders struggle with similar difficulties such as, lack of peer friendships and academic problems (Williams & Kelly, 2005).

1.5.2. Parent Control [Behavioral Control and Psychological Control]

One topic of considerable interest to researchers concerns how parents supervise and control the behavior and activities of their adolescent children. The term “parent control” has been used to describe such parenting behaviors and styles. In the literature, two forms of parent control have been identified: behavioral control and psychological control (Barber, Olsen, & Shagle, 1994). Although both dimensions are incorporated into the umbrella term “parent control”, the two labels elucidate the important distinction between parental control of adolescent behavior and parental control of the adolescent’s psychological world (Barber, Maughan, & Olsen, 2005).

Behavioral control refers to parental behaviors (e.g. rules setting and monitoring) that are intended to control and regulate the adolescent’s behavior. It involves expectations, clear and consistent rules, and predictable contingencies for the child’s or adolescent’s behavior (Mills & Rubin, 1998). In contrast, psychological control refers to control attempts (e.g. love withdrawal and guilt induction) that “constrain, invalidate, and manipulate a child’s psychological and emotional experience and expression” (Barber, 1996). Psychological control interferes with adolescent’s development of independent expression and autonomy by keeping the child emotionally dependent on the parent through excessive overprotectiveness, or threats to security and self-esteem (e.g. devaluation, shame, and love withdrawal) (Mills & Rubin, 1998).

Existing literatures have found differential associations of parenting with adolescent externalizing and internalizing behaviors (e.g. Galambos et al., 2003; Hoeve et al., 2009). Behavioral under-control has been directly linked with externalizing behaviors such as substance use, antisocial behavior, and delinquency (Galambos et al., 2003; Pettit, Laird, Dodge, Bates, & Criss, 2001). This may be because under-controlled environments do not foster self-regulation in children, often leaving them more reckless

and more willing to violate social norms (Barber, 1996). In contrast, higher psychological control has been traditionally associated with internalizing symptomatology such as depression, low self-confidence, and low self-esteem (Pettit et al., 2001). The reason for this may be due to the negative effects of psychological control on children's self-image and feelings of competence (Soucy & Larose, 2000); adolescents who experience psychological control may see their parents as being non-responsive to their emotional and psychological needs, and, hinder the adolescents' abilities to trust their own uniqueness and ideas (Barber, 1996).

1.5.3. Parent-Adolescent Conflict

It is now widely acknowledged that the relationship between a child and his parents is of critical importance as it forms a foundation for future behaviors and interpersonal relationships. For adolescence, a time of transformation in an adolescent's life, one parenting domain that reflects important aspects of the parent-adolescent relationship is the *conflict* domain (Steinberg & Silk, 2002).

Parent-adolescent conflict can be conceptualized as a parent-youth dyadic relationship characterized by negativity, such as conflict and hostility (Eichelsheim et al., 2010). A parent-child relationship characterized by conflict involves negative arguing, an evident dislike of the child by the parent, and aggressive problem-solving strategies (Ingoldsby et al., 2006).

Past research has demonstrated conflict to be an important predictor of adolescents' externalizing experiences (Buehler, 2006; Eichelsheim et al., 2010; Marmorstein & Iacono, 2004; Zadeh et al., 2010). For example, Marmorstein and Iacono (2004) found that externalizing behavior problems such as Conduct Disorder (CD) in adolescents were directly associated with high parent–child conflict. Furthermore, it has

also been proposed that dyadic hostility may be positively associated to youth internalizing problems. A reason for this could be that the critical aspect of hostility might corrode self-esteem and contribute to depression and anxiety (cited in Buehler, 2006). Nevertheless, findings have been inconclusive; for example, Marmorstein and Iacono (2004) found adolescent's internalizing psychopathology to be associated to parent-youth conflict, whereas the opposite effect was found in other studies (e.g. Buehler, 2006).

1.5.4. Callous-Unemotional [C-U] Traits

Callous-Unemotional (C-U) traits represent a dimension of behavior that is characterized by superficial charm and lack of guilt and empathy (Frick & White, 2008). C-U traits, considered the hallmark of the construct of psychopathy (cited in Fanti, Frick, & Georgiou, 2009), have been shown to be relatively stable throughout childhood and adolescence (Frick & White, 2008).

Important to the studying of problem behaviors, are a number of studies which reported significant correlations between C-U traits with measures of conduct problems and psychosocial impairment; for example, Essau et al. (2006) have found that the Inventory of Callous-Unemotional Traits (ICU) scale (Frick, 2004) provided a unique contribution in predicting problematic behaviors (Essau et al., 2006).

Relevant to the moderation role of C-U traits between parent variables and externalizing and internalizing behavior problems, is the possibility that youths with high levels of C-U traits may influence parental behavior to a much greater degree than children with low C-U traits. In one study, researchers found that high levels of C-U traits appear to drive change in quality of parenting over time; more specifically, C-U traits were associated with increased levels of inconsistent discipline, increased levels

of corporal punishment, and reduced levels of parental involvement (Hawes, Dadds, Frost, & Hasking, 2011). Likewise, a similar study found that C-U traits significantly moderated the link between positive parent-child relationships and future externalizing behavior problems (Kochanska et al., 2013), a finding similar to findings from other research (e.g. Edens et al., 2008; Kroneman, Hipwell, Loeber, Koot, & Pardini, 2011; Pasalich, Dadds, Hawes, & Brennan, 2011).

1.5.5. Narcissism

Narcissism can be defined as a "pervasive pattern of grandiosity" which encompasses characteristics such as arrogance, feelings of superiority, and a lack of empathy for or concern about others (cited in Horton, Bleau, & Drwecki, 2006). In essence, narcissistic people possess grandiose views of the self and strive to strengthen those views at every opportune moment. Even so, high narcissism is considered pathological and has been associated to both externalizing (Kerig & Stellwagen, 2009; Marsee, Silverthorn, & Frick, 2005; Washburn, McMahon, King, Reinecke, & Silver, 2004) and internalizing behaviors (Barry & Malkin, 2010; Washburn et al., 2004).

One explanation that can be given for the association between narcissism and externalizing behaviors is that narcissistic individuals are highly motivated to maintain their narcissistic self-view through various interpersonal or intrapersonal mechanisms. Hence, when faced with an ego threat and their self-view is challenged, such individuals may become increasingly vulnerable and, as such, act aggressively (Baumeister, Smart, & Boden, 1996).

With regard to internalizing behavior problems, it is proposed that despite the confident, grandiose, presentations of narcissistic individuals, a narcissistic presentation masks an underlying self-doubting, unconfident, and insecure self-perception (cited in

Barry & Malkin, 2010). Empirical evidence of internalizing problems as associated features of narcissism have received minimal attention and the evidence that does exist is mixed. Although high levels of narcissism was found to be symptomatic of underlying, relatively automatic negative self-views in adults (Jordan, Spencer, Zanna, Hoshino-Browne, & Correll, 2003), other evidence reported the opposite. Barry and Malkin (2010) concluded that narcissism was negatively associated with self-reported internalizing problems. Considering that, based on increasing research evidence, narcissism appears to have psychosocial relevance prior to adulthood (Barry & Malkin, 2010), further research on the construct of narcissism and its correlates across the childhood or adolescent period would contribute to a great extent to our understanding of self-perception and its significance in psychological functioning.

Narcissism has also been associated with parenting behavior; psychological control has been associated positively and significantly with unhealthy narcissism, whereas monitoring predicted unhealthy narcissism negatively, meaning that, the less monitoring the participants reported from their parents, the higher the narcissism scores tended to be (Horton et al., 2006). One limitation posed by the researchers (Horton et al., 2006) is the lack of consideration of a reverse relation between narcissism and parenting. Consequently, due to the fact that research which examines the association between narcissism and parenting is minimal in number, this makes it difficult to draw any meaningful conclusions about any kind of an association.

1.5.6. Impulsivity

Impulsivity, a multidimensional concept, involves the tendency to act quickly and without reflection, handling of different emotions, rapid processing of information, novelty seeking, and ability to delay gratification (cited in Ramírez & Andreu, 2006). Impulsivity

relates – to a large degree – to the prediction of several behavior problems (cited in Hoaken, Shaughnessy, & Phil, 2003). The moderating role of impulsivity on parenting factors in predicting externalizing behaviors has been demonstrated in studies. For example, significant interactions that indicated inconsistent discipline to be more strongly related to adjustment problems for children high in impulsivity were documented (Lengua, Wolchik, Sandler, & West, 2000); similarly, Leve, Kim, and Pears (2005) found harsh parental discipline to predict externalizing behavior in girls only when accompanied by an individual vulnerability (e.g. high impulsivity).

1.6. Hypotheses

The present study aims to expand on previous research by investigating the direct and indirect paths through which externalizing and internalizing behaviors are experienced. Based on the existing literature and on the idea that factors interact in determining human development (Bronfenbrenner, 1977), the present study hypothesizes that the experiences of externalizing and internalizing behaviors are an outcome of the interrelation between the characteristics of the adolescent's individuality (psychopathic traits) and qualities of parent practices and parent-child relationship. To this end, the following research hypotheses are proposed:

1. Parent control will be significantly related to adolescents' exhibition of externalizing and internalizing behaviors.

1.1. Behavioral control will significantly negatively predict both externalizing and internalizing behaviors.

1.2. Psychological control will significantly positively predict externalizing and internalizing behaviors.

2. Parent-adolescent conflict will be significantly related to adolescents' exhibition of externalizing and internalizing behaviors.

2.1. Parent-adolescent conflict will significantly positively predict externalizing behaviors.

2.2. Parent-adolescent conflict will significantly positively predict internalizing behaviors.

3. Psychopathic features of adolescents such as C-U traits, narcissism, and impulsivity will be significantly related to externalizing behaviors.

3.1. C-U traits will significantly positively predict externalizing behaviors.

3.2. Narcissism will significantly positively predict externalizing behaviors.

3.3. Impulsivity will significantly positively predict externalizing behaviors.

4. Psychopathic features of adolescents such as C-U traits, narcissism, and impulsivity will be significantly related to internalizing symptomatology.

4.1. C-U traits will significantly positively predict internalizing behaviors.

4.2. Narcissism will significantly positively predict internalizing behaviors.

4.3. Impulsivity will significantly positively predict internalizing behaviors.

5. The relationship between parent control, parent-adolescent conflict and adolescents' exhibition of externalizing and internalizing behaviors will be significantly moderated by the adolescents' psychopathic features.

5.1. The association between negative parenting practices and externalizing behaviors will be significantly stronger for adolescents with C-U traits, narcissism, and impulsivity.

5.2. The association between negative parenting practices and internalizing behaviors will be significantly stronger for adolescents with C-U traits, narcissism, and impulsivity.

5.3. The association between parent-adolescent conflict and externalizing behaviors will be significantly stronger for adolescents with C-U traits, narcissism, and impulsivity.

5.4. The association between parent-adolescent conflict and internalizing behaviors will be significantly stronger for adolescents with C-U traits, narcissism, and impulsivity.

6. When considering maternal and paternal significance for the development of adolescents' externalizing and/or internalizing difficulties, both parents will be statistically important in determining the adolescents' behavioral and psychosocial well-being.

1.7. Organisation of the study

The present research study is composed of five distinct chapters. The first chapter encompasses the statement of the problem, the purpose of the study as well as the respective hypotheses. Additionally, the significance and contribution of the study are addressed, as well as a synopsis of the basic concepts relevant to the present study.

The second chapter presents and describes the theoretical framework of the present study, followed by an extensive literature review of the main factors of interest – parent control (behavioral control and psychological control), parent-adolescent conflict, C-U traits, narcissism, and impulsivity, relating to experiences of externalizing or internalizing behavior problems.

The third chapter concentrates on the methodology of the present research study. Included, are information on the sample of participants used in the study, the materials utilized for gathering the data, as well as information on the data collection process. The statistical analysis techniques employed for the analysis of data are presented as well.

The fourth chapter includes the research findings of the present study, and finally, the fifth and last chapter discusses and construes the findings in relation to the posited hypotheses. Recommendation of practical application of the findings as well as suggestions for future research is offered.

1.8. Overview of the current study

The main purpose of the present study is to investigate the direct and indirect paths through which parental and personal factors associate with adolescents' experiences of externalizing and internalizing behaviors. More specifically, the research questions aim to provide an understanding of how parental factors may influence the development of externalizing and internalizing behaviors. Moderation effects were also examined using C-U traits, narcissism, and impulsivity as moderators on the relationship between parental factors, and the development of externalizing and internalizing behaviors. Behavioral measures of impulsivity were also employed in the second – quasi-experimental – phase of the study to further examine the role of impulsivity.

The first phase of the study included 538 adolescents and their mothers and fathers. Overall, 513 mothers and 464 fathers participated in the study. Adolescents who participated in the study met the following criteria: 1) they were students of lyceum (grades 4th, 5th, and 6th of secondary education), and 2) their parents/legal guardians consented for their participation in the study. Additionally, included in the analyses of the study were only adolescent students whose parents also participated in the study (by completing the corresponding questionnaires).

Each adolescent was given an envelope to take back home and give to their parents. Each envelope contained an information letter, one consent form to be signed by the parents for their adolescent child to take part in the study, and two sets of

questionnaires to be completed by the parents; one set for the mother and one set for the father (all sets of questionnaires were matched with a district code number, so as to be aware of which parental questionnaires correspond to their child's set of questionnaires (which would be completed at a later date). After one week, those adolescents whose parents' did provide the required consent were given a set of questionnaires to complete.

Adolescents completed the 50-item Youth Psychopathic Traits Inventory (YPI; Andershed, Kerr, Stattin, & Levander, 2002) which assessed psychopathy among youth, and the 20-item Children's Report on Parent Behavior Inventory (CRPBI; Schludermann & Schludermann, 1988) which measures adolescents' perceptions of parents' use of behavior and psychological control tactics. Parents completed the 12-item conflict subscale of the Child-Parent Relationship Scale (CPRS; Pianta, 1992) which assesses parents' perceptions of their relationships with their child, as well as, the 40-item Child Behavior Checklist – Parent Report (CBCL; Achenbach, 1991) which measures externalizing and internalizing behaviors.

For this, first, phase of the study, the general research questions were: Which parental and personal factors are predictive of adolescent's expression of externalizing and internalizing behaviors? More specifically, the parenting factors which were examined included parent control (behavioral control, psychological control) and parent-adolescent conflict, and the personal factors which were examined were adolescents' psychopathic traits (C-U traits, narcissism, and impulsivity). Moreover, the moderating role of psychopathic traits in the relationship between parent control, parent-adolescent conflict, and externalizing and internalizing behaviors was also examined. This was done to determine the conditions (e.g., low or high levels of C-U traits, narcissism, or

impulsivity) in which certain aspects of parenting are more strongly related to externalizing and internalizing behaviors.

The second phase of the study included adolescents who had been identified from the first phase of the study and through statistical calculations as extreme cases in terms of their exhibition of externalizing and internalizing behaviors. In total, thirty-six adolescents participated in the second phase of the study; 18 adolescents were included in the externalizing behaviors group (9 students displayed low externalizing behaviors and 9 students displayed high externalizing behaviors), and 18 adolescents were included in the internalizing behaviors group (9 students displayed low internalizing behaviors and 9 students displayed high internalizing behaviors). Adolescents who participated in the second phase of the study had to meet the following criteria: 1) they participated in the first phase of the study, and 2) they signed their interest in participating in the second phase of the study.

During the procedure, each adolescent was given a set of questionnaires to complete, and also had to complete two behavioral measures. More specifically, adolescents completed the 37-item Self-Rated Dysexecutive Questionnaire (DEX; Wilson, Alderman, Burgess, Emslie, & Evans, 1996) which assesses four areas of functioning associated with executive difficulties, and the 40-item Youth Self-Report (YSR; Achenbach & Rescorla, 2001) which measures externalizing and internalizing behaviors. Additionally, participants were asked to complete two behavioral measures of impulsivity; the GoStop Impulsivity Paradigm (GoStop; Dougherty et al., 2003, 2005a), and the Two Choice Impulsivity Paradigm (TCIP; Dougherty et al., 2003, 2005a). The GoStop is a stop-task requiring responses to target stimuli and inhibiting responses when the target is unpredictably coupled with a stop signal, whereas the TCIP is a discrete-choice procedure, for assessing tolerance for delayed rewards. In the

second phase of the study, subgroup differences in the responses of impulsivity were examined, as was the moderation role of impulsivity in the relationship between parent control, parent-adolescent conflict, and externalizing and internalizing behaviors.

To answer the research questions of the first phase of the study, a series of regression analyses, and moderation analyses were computed. Furthermore, a series of independent-samples t-tests and paired-samples t-tests were also computed to explore group differences in the presence of psychopathic traits, experiences of externalizing and internalizing behaviors, use of behavioral and psychological control, and parent-adolescent conflict. Results of the first phase of the study showed that certain aspects of parenting are important in the prediction of adolescent's experiences of externalizing and internalizing behaviors. Parental factors, such as psychological control, as well as, parent-adolescent conflict, positively predicted externalizing behaviors and internalizing behaviors. On the other hand, in regards to adolescent's personal factors, only impulsivity was an important predictor of externalizing behaviors.

Additionally, moderation analyses using PROCESS macro for SPSS (Hayes, 2013) showed that the relationship between certain aspects of parenting and externalizing and internalizing behaviors was moderated by adolescents' psychopathic traits; in other words, the association between parent factors and behavior difficulties was stronger for adolescents with certain characteristics. Specifically, moderation analyses demonstrated that, for girls, use of psychological control was more strongly positively related to externalizing behaviors when adolescent girls had higher C-U traits. Additionally, the relationship between father-adolescent conflict and externalizing behaviors was moderated by the presence of C-U traits both for boys and girls, as was the relationship between father-adolescent conflict and girls' internalizing behaviors. Likewise, for girls, narcissism moderated the relationship between father psychological

control and internalizing behaviors; in other words, father psychological control was more strongly positively related to internalizing behaviors when adolescent girls had high levels of narcissism. Finally, for boys, the relationship between mother-adolescent conflict and externalizing behaviors was moderated by impulsivity; that is when mother-adolescent conflict was high, it was adolescents who were more impulsive that exhibited more aggressive and delinquent behaviors.

An important finding of the study is that both parents were important for the behavioral and psychosocial well-being of their adolescent children. This challenges traditional views and past research wherein fathers were systematically underrepresented or excluded from research on the grounds that, as mothers are the main caregivers of their children, it is them who are most influential for their child's behavioral and psychological well-being. Results found that both psychological control and parent-adolescent conflict were important factors for the prediction of externalizing and internalizing behaviors, and this effect was true both for fathers and mothers.

Additional data analyses were computed, such as independent-samples t-tests and matched-pairs t-tests, to examine possible group differences, and analyses yielded important findings. More specifically, results found sex differences in the presence of psychopathic traits, with boys scoring higher than girls in all three dimensions of psychopathy. In other words, callous-unemotionality, narcissism, and impulsivity were more evident in boys than in girls. When exploring sex differences in the exhibition of externalizing and internalizing behaviors, no differences were found in regards to externalizing behaviors. Nonetheless, sex differences were noted for internalizing behaviors, with girls displaying more internalizing symptoms than boys. Furthermore, group differences were also identified for adolescents who showed evidence of externalizing behaviors; adolescents who were classified as displaying high

externalizing behaviors scored considerably higher in the callous-unemotional, narcissistic, and impulsive dimensions of the YPI (Andershed et al., 2002) than adolescents in the low externalizing behaviors group. Finally, matched-pairs t-tests revealed significant differences for fathers and mothers. Fathers were found to demonstrate more behavioral control tactics than mothers, whereas mothers used more psychological control tactics than fathers. Likewise, for both adolescent boys and girls, mother-adolescent conflict was higher than father-adolescent conflict. That is, mother-adolescent conflict was significantly more evident than father-adolescent conflict. This does make more sense, as mothers were found to employ more psychological control tactics than fathers, something that reasonably corrodes mother-adolescent relationship.

To explore subgroup differences in the responses of impulsivity in the second phase of the study, a series of non-parametric tests such as Mann-Whitney U tests and Wilcoxon Signed Rank Tests were computed. Further, to explore possible associations between: the self-reported measures of impulsivity and the behavioral measures of impulsivity, as well as, parent-reports and self-report measures of externalizing and internalizing behaviors, bivariate correlations (Spearman's rho) were computed. Lastly, a series of moderation analyses were, again, computed using PROCESS macro for SPSS (Hayes, 2013). Results of the second phase of the study showed that there were no group differences in levels of impulsivity. More specifically, levels of impulsivity were not significantly different between adolescents who display either externalizing behaviors and the control group, or internalizing behaviors and the control group. In the same way, the subgroups' were neither different in either one of the four areas of functioning associated with executive difficulties.

Additionally, moderation analyses using PROCESS macro for SPSS (Hayes, 2013) showed that the relationship between certain aspects of parenting and externalizing and internalizing behaviors was moderated by impulsivity. Firstly, impulsivity was found to moderate the relationship between father psychological control and externalizing behaviors; that is, use of father psychological control was more strongly related to externalizing behaviors only when adolescents were highly impulsive. Likewise, the relationship between mother-adolescent conflict and internalizing behaviors was moderated by the presence of impulsivity. And lastly, the relationship between father behavior control and internalizing behaviors was also moderated by impulsivity; that is, the relationship between father behavior control and internalizing behaviors was stronger for adolescents with high levels impulsivity.

The results of the present study contribute to the existing literature in a number of ways. A main contribution of the present study is the finding that, besides C-U traits, the remaining two psychopathic traits did moderate the relationship between specific aspects of parenting and externalizing and internalizing behaviors. Also, one other important contribution of the present research is the in-depth exploration of impulsivity; this adds to the relevant literature, as there are only but a few studies which have assessed measures from multiple domains using the same participants (cited in Meda et al., 2009). Finally, the finding that both parents are important in determining the degree to which externalizing and/or internalizing behaviors would be experienced is also an important contribution of the study. This finding has practical applications as well, as it can provide novel approaches in parent training programmes. For example, prevention and intervention methods should highlight the importance that both parents play in the behavioral and psychosocial well-being of their child.

2. CHAPTER 2 – Review of the Literature

2.1. Introduction

An important differentiation in the field of Child Psychology/Psychopathology and Child Psychiatry is the separation between two classes of dysfunctional response styles – "externalizing" and "internalizing" disorders (Achenbach, 1978).

The construct of externalizing behavior includes a group of behavior problems that are evident in children's outward behavior and reflect the child acting on the *external* environment in a negative way. Externalizing behaviors can take the form of rule-breaking actions, aggression, and delinquency. Such behaviors are highly problematic for society. According to the U.S. Department of Justice, Federal Bureau of Investigation (2009), in 2008, approximately 1.2 million American children under the age of 18 were arrested for various crimes. The vast majority of these offenses were for property crime, theft, and drug- and alcohol-related violations and assault. According to a 2007 study conducted by the Centers for Disease Control and Prevention, a very high percentage of American high-school students have engaged themselves in a variety of rule-breaking and aggressive behaviors; nearly 45% had used alcohol, 19.7% had used marijuana, and 35.5% had been in a physical altercation in the past year. Similar percentages were observed in other developed countries; for example, Monshouwer and his colleagues (2008) reported that, in the Netherlands, 50.5% of high-school students had used alcohol, 13.5% had used marijuana, and 29% were in a physical fight in the past six months. These statistics are troubling because the adverse effects of externalizing behaviors are not only immediate but long-term as well, and they affect both the individual and the public. Longitudinal research shows that adolescent externalizing behaviors are a major risk factor for a number of negative outcomes, such as juvenile delinquency, and future crime and violence (cited in Liu, 2004). Moreover,

high externalizing behaviors were associated with decreased educational and occupational attainment in adulthood (e.g., Tanner, Davis, & O"Grady, 1999), and low attainment may act as a mediator in the relationship between adolescent delinquency and depression in young adulthood (Siennick, 2007).

On the other hand, internalizing behaviors refer to behavior problems that are inner-directed and overcontrolled (Madigan et al., 2012). In other words, contrary to externalizing behaviors, internalizing behaviors have an effect on the individual's psychological world, and not on the child's external world (Liu, 2004). People experiencing internalizing disorders present symptoms related to social isolation, withdrawal, anxiety, and depression (Madigan et al., 2012; Williams & Kelly, 2005). More specifically, depression is a widespread and serious problem among the teenage population, with prevalence estimates to suggest that 15-35% of adolescents experience depressive symptoms during the adolescent period (cited in Hamza & Wilioughby, 2011). But, due to the fact that internalizing behavior problems do not create a disturbance that disrupts the external environment, they often go unnoticed. Nevertheless, despite not being evidently noticeable, children and adolescents who experience internalizing behavior problems also struggle with difficulties (Williams & Kelly, 2005); for example, in the long-term, depressed mood is positively associated to Major Depressive Disorder (MDD), a disorder in which by age nineteen about 35% and 19% of adolescent females and males, respectively, will experience at least one episode (Lewinsohn et al., 1998). Furthermore, higher levels of adolescent depressive symptoms are associated with less positive adjustment in adulthood (cited in Hamza & Wilioughby, 2011), lower levels of self-esteem and self-efficacy (Kerr & Stattin, 2000), externalizing behavior engagement (Fleming, Mason, Mazza, Abbott, & Catalano,

2008), poor academic achievement, greater risk for suicidal behaviors or ideation during adolescence, and, increased risk of attempted suicide and completed suicide in adulthood (cited in Plunkett et al., 2007).

Given the prevalence of externalizing and internalizing behaviors and their short-term *and* long-term consequences, researchers have recognized the importance of understanding the nature of these behaviors. Research on the parameters of externalizing and internalizing behaviors includes an examination of intrapersonal (e.g., characteristics of the child) and interpersonal (e.g., parent-child relationship) factors. Among the characteristics of the social context that can influence to a great extent the development of externalizing and internalizing behaviors are parental factors. Previous research has evidently demonstrated that the families of youth with a variety of forms of psychopathology tend to be disturbed (e.g., Eichelsheim et al., 2010; Hoeve et al., 2009; Zadeh et al., 2010). These disturbances include problems in interactions among family members, such as parents and the young person (cited in Marmorstein & Iacono, 2004). Although this proposition has been widely researched, most of the parental research to date has tested uni-directional models wherein parents are thought to directly affect their children's externalizing and internalizing behavior problems (Fanti et al., 2008). For example, negative parenting practices, such as low behavioral control and high psychological control, as well as a parent-adolescent relationship marked by feelings and incidents of conflict, are considered to be important factors affecting the development of externalizing and internalizing problems. Nevertheless, even though the significant role of the parenting domain is undeniable, concrete conclusions about the magnitude of the links between parental factors and adolescent psychopathology are not easy to draw. This highlights the importance for an other approach in research, other than uni-directional models, that will offer more solid, tangible conclusions.

One recent idea put forward by researchers is the notion that the association between ineffective parenting and children's externalizing and internalizing behaviors is truer for some youths than others. According to this view, difficult, hard-to-manage children can be co-participants in the emergence of coercive parent-child exchanges and the development of behavior problems (Kochanska et al., 2013; Oxford et al., 2003). Indeed, Patterson (1976) declared the aggressive child both "victim and architect of a coercive system". Taking this concept into consideration, moderation effects will also be examined; moderators indicate *under what conditions* or *to whom* the relationship between parental variables and externalizing and internalizing behaviors exist. In the present research study, the adolescents' psychopathic traits will be considered as moderators. The construct of psychopathy is conceptualized as a distinct constellation of interpersonal (e.g., callous use of others for one's own gain), affective (e.g., poverty of emotions, lack of empathy), and behavioral features (e.g., impulsive behavior) (Cleckley, 1976; Edens et al., 2008). Although psychopathy is often treated as a unitary construct, there is evidence of separable dimensions related to core affective–interpersonal features (e.g., callousness, grandiosity) and lifestyle–behavioral features (e.g., impulsivity) (cited in Edens et al., 2008). Evidence on the moderation effect of adolescents' psychopathic traits on the relationship between parental variables and externalizing and internalizing behaviors is documented (Edens et al., 2008; Kochanska et al., 2013; Kroneman et al., 2011; Lengua et al., 2000; Leve, et al., 2005; Pasalich et al., 2011); even though, further research is required to address a number of limitations posed in past research (e.g. Cosi, Hernández-Martínez, Canals, & Vigil-Colet, 2011; Costello, Egger, & Angold, 2004; Horton et al., 2006), and thus to provide more valid and credible conclusions.

The theoretical framework of the present study focuses on the examination of the stated variables, investigating the direct and indirect paths through which parental and personal factors associate with adolescents' exhibition of externalizing and internalizing behaviors. The purpose is to expand on previous research by considering theoretical and methodological limitations of past research. Doing so, will create important methodological avenues for future research, but will have practical implications as well, such as in parent training, and prevention and intervention programmes.

The present chapter presents the theoretical framework for the current study, followed by a review of the literature. The literature review describes the main variables of interest – parental control (= behavioral control, and psychological control), parent-adolescent conflict, and adolescent psychopathic traits (= C-U traits, narcissism, impulsivity) – and how these variables relate either through a direct or indirect path to externalizing and internalizing behaviors.

2.2. Theoretical framework of the present study

In the field of Psychology, the cause-and-effect relationship has been the pursuit of many scholars. Examining cause-and-effect hypotheses authenticates researchers' theories around a phenomenon and answers practical questions; for instance, whether it is expected that an intervention or treatment program will have the desired outcomes. However, as research matures, scholars often go beyond the simplistic account of the bivariate causal relationship, and attempt to understand what bridges the cause-and-effect relationship and what alters the magnitude or direction of the causal relationship (cited in Wu & Zumbo, 2008). Studying moderator effects are one way to examine such indirect relationships.

The present research study adopts the viewpoint that the adolescent can be both a passive and an active agent in his development. Arguments in regards to the proposition that the adolescent can be a passive agent in his socialization process assert that the social context (e.g., familial environment) can have a direct influence on the young person. Unlimited empirical evidence supports this argument. For example, over the past several decades there has been an important recognition of the significance of the parenting domain for children's and adolescent's psychopathology. A myriad of research has been conducted and has offered theoretical and empirical evidence regarding the ways that parents induce certain behaviors from their youths (e.g., Galambos et al., 2003; Hoeve et al., 2009; Miller, Jennings, Alvarez-Rivera, & Lanza-Kaduce, 2009; Muris, Meesters, & van den Berg, 2003; Pettit et al., 2001; Richaud de Minzi, 2010).

More recently, researchers have emphasized the need to consider that the adolescent can, too, influence his development. In view of this, the relationship can be direct – a direct relationship of personal factors on the adolescent's development, – or indirect; for instance, through a moderator effect. According to Baron and Kenny's (1986) moderator model, a moderator is a qualitative or a quantitative variable that specifies when or under what conditions a predictor variable influences a dependent variable (Baron & Kenny, 1986). Essentially, a moderator variable may reduce or enhance the direction of the relationship between a predictor variable and a dependent variable, or it may even change the direction of the relationship between the two variables from positive to negative or vice versa (cited in Kim, Kaye, & Wright, 2001). The essential properties of a moderator variable are summarised in Figure 2.1.

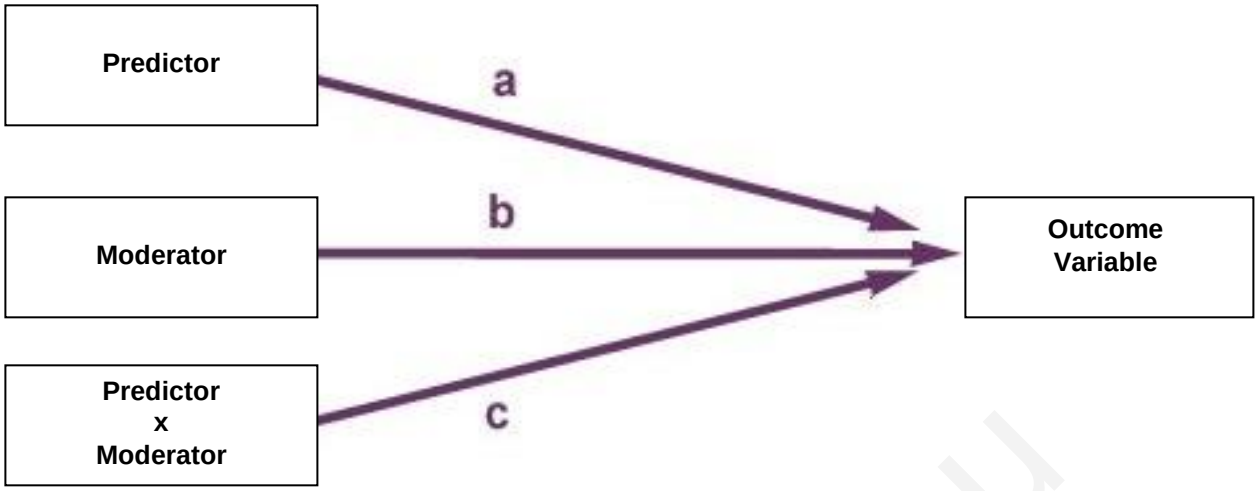


Figure 2.1. Moderator Model (adapted from Baron & Kenny, 1986)

The model diagrammed in Figure 2.1 has three causal paths that feed into the outcome variable of externalizing and internalizing behaviors; the influence of the parental factors – behavioral control, psychological control, parent-adolescent conflict – as predictors (Path a), the influence of the adolescents' psychopathic traits – C-U traits, narcissism, impulsivity – as a moderator (Path b), and the interaction of these two – parental factors and adolescent's psychopathic traits – (Path c). The moderator hypothesis is supported if the interaction (Path c) is significant (Baron & Kenny, 1986). Although there may also be significant main effects both for the predictor variables (Path a) and the moderator variables (Path b), these are not directly relevant conceptually to testing the moderator hypothesis (Baron & Kenny, 1986).

The model developed for the examination of the present research study and the present research hypotheses, includes both parental factors (parental control (behavioral control, psychological control) and parent-adolescent conflict), as well as, personal factors (psychopathic traits (C-U traits, narcissism, impulsivity)) (Figure 2.2.).

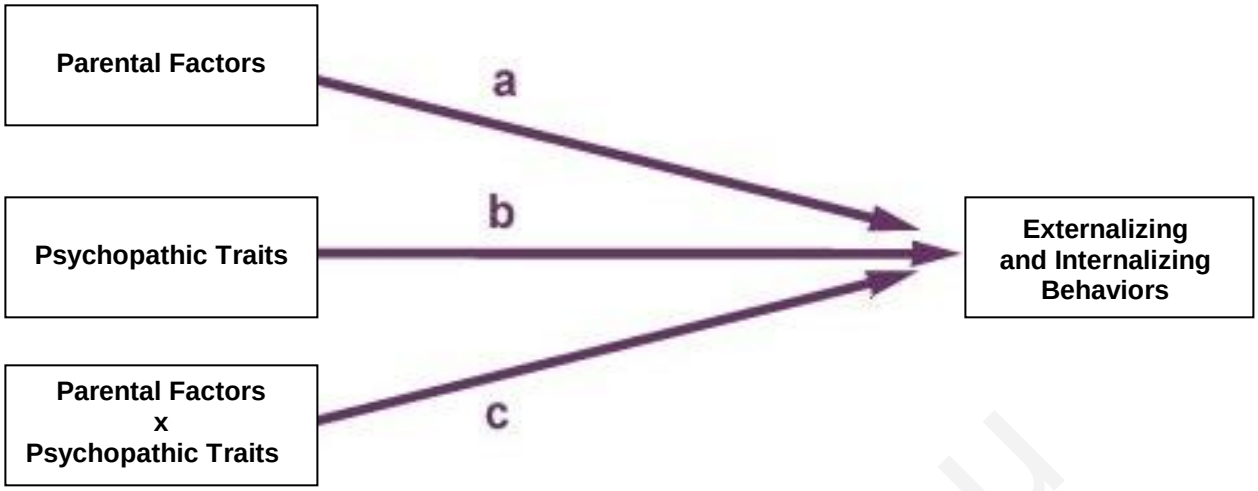


Figure 2.2. Theoretical model of the study

The combination of parental factors and personal factors is expected to enhance a deeper and more refined understanding of the factors that contribute in the experiences of externalizing and internalizing behaviors. Besides, according to the ecological (Bronfenbrenner, 1977) model, several factors interact in determining human development, and so, it is more beneficial to study the interrelations of factors rather than merely studying one factor directly influencing the dependent variable.

In sum, the existing theoretical and empirical literature is the foundation of both the theoretical model of the present study – to examine the direct and indirect paths through which parental control, parent-adolescent conflict, and adolescents' psychopathic traits associate with externalizing and internalizing behaviors – and the related research hypotheses.

2.3. Parameters of Externalizing and Internalizing Behaviors

As evidenced from previous research, externalizing and internalizing behaviors are associated with a number of short-term and long-term negative consequences, such as

juvenile delinquency and future violence (cited in Liu, 2004), decreased educational and occupational attainment (Tanner, Davis, & O''Grady, 1999), less positive adjustment (cited in Hamza & Wilioughby, 2011), and low levels of self-esteem and self-efficacy (Kerr & Stattin, 2000). Given the large number of adverse effects associated with these problem behaviors makes it crucial to identify the factors related to such behaviors.

Research on the parameters of externalizing and internalizing behaviors includes investigation of both intrapersonal (e.g., characteristics of the child) and interpersonal (e.g., parent-child relationship) factors. For example, among the interpersonal characteristics that can have an effect on the expression of externalizing and internalizing behaviors are parental factors. Past research has consistently found evidence that the families of young people who present a variety of forms of psychopathology tend to be disturbed (e.g., Eichelsheim et al., 2010; Hoeve et al., 2009; Zadeh et al., 2010). Negative parenting practices, such as low behavioral control and high psychological control, as well as a parent-adolescent relationship marked by feelings and incidents of conflict, are considered to be important factors affecting the development of externalizing and internalizing problems. Despite the vast amount of evidence which favors the relationship between ineffective parenting and psychopathology, one recent concept is the notion that the association between negative parenting and children's externalizing and internalizing behaviors is truer for some youths than others. Taking this view into consideration, it is possible that some children (adolescents) can be co-participants in the emergence of coercive parent-child exchanges and the development of behavior problems (Kochanska et al., 2013; Oxford et al., 2003). Temperamental factors found to be important in explaining this relatively

new idea include adolescent C-U traits, narcissism, and impulsivity, or, more broadly defined under the general term “psychopathic traits”.

The following section centers on the relationship between parenting aspects and externalizing and internalizing behaviors as well as on personal factors and externalizing and internalizing behaviors, with an overall aim to provide an insight into the ways that these characteristics are related to these behavior problems.

2.3.1. Parental Factors

The concept of parental importance has been well documented since Freud first suggested that the infant’s emotional tie to the mother provides the foundation for all other later relationships (Ireland & Power, 2004). Over the past several decades there has been an important recognition of the significance of the parenting domain for children’s and adolescent’s psychopathology. A myriad of research has been conducted and has offered theoretical and empirical evidence regarding the ways that parents induce certain behaviors from their youths (e.g., Galambos et al., 2003; Hoeve et al., 2009; Miller et al., 2009; Muris et al., 2003; Pettit et al., 2001; Richaud de Minzi, 2010). Nonetheless, whereas parental factors have been studied extensively over the years, past research has often neglected the influence of fathers on children’s development within multiple family contexts. Even though the comparatively few studies that considered the father figure as important to be studied indicate that paternal behaviors are critical in children’s and adolescents’ adjustment (e.g. Buist et al., 2004; Flouri & Buchanan, 2002, 2003), it remains that fathers are underrepresented in studies of child development and are still seldom a focus of systematic study. In a recent meta-analysis (Hoeve et al., 2009), it was concluded that, compared to research focusing on the mother-figure, less than 20% of the studies focused on the parenting behavior of

fathers, despite the fact that the effect of certain paternal parenting behaviors was larger than maternal parenting behaviors. Hence, to offer a more concrete conclusion to questions such as how parental factors – not simply maternal factors – are related to the behavior difficulties of their adolescent children, it is essential to regard the role that fathers play as equally important as to that of mothers.

Among the most prominent and noteworthy theories which guides research even so many years following its formulation is the theory of attachment (Bowlby, 1969). Attachment theory posits the importance for the development of a balanced, secured child, and how healthy parent-child interactions and relationships serve as a secure base from which children can explore their environment. As the attachment theory is regarded as one of the most influential theories in the field of Developmental Psychology, in the years subsequent to the formation of the theory, academics, researchers, and theorists have focused on a diverse range of parenting and familial variables thought to influence the behavior of children and adolescents.

Amongst the most instrumental factors evidenced to have an impact on the behavioral and psychosocial development of children and adolescents are the parental rearing practices, and the relationship shared between the parent and the child.

Parenting practices refer to the behaviors that a parent employs in raising a child. According to Baumrind (1991), such behaviors, conceptualized as parental styles, have two dimensions: demandingness (i.e. controlling behavior and limit-setting for the child) and responsiveness (i.e. responding to child's needs and being supportive). High scores in both dimensions are characteristic of the authoritative parenting style and low scores in both dimensions are characteristic of the neglectful parenting style. The other two combinations (high responsiveness-low demandingness and high demandingness-low responsiveness) are characteristic of the permissive and authoritarian parenting styles

respectively (Georgiou, 2008). The present study will examine parenting practices that elucidate an important distinction between parental control of adolescent behavior and parental control of the adolescent's psychological world, namely behavioral control and psychological control.

Moreover, it is now acknowledged that the parent-child relationship is of crucial importance for the child's and adolescent's socialization process. For adolescence, one parenting domain that reflects important aspects of the parent-adolescent relationship is the conflict domain (Steinberg & Silk, 2002). Parent-adolescent conflict can be defined as a parent-youth dyadic relationship characterized by negativity, such as conflict and hostility (Eichelsheim et al., 2010), and so, will be further examined in the present study.

2.3.1.1. Parental Control

A topic of considerable interest to socialization researchers is the way in which parents supervise and regulate the behavior and actions of their children, and within the literature, the general rubric of "parental control" has been used to describe such parenting behaviors and styles (Pettit et al., 2001).

One current trend in the study of parental behaviors has been to revive a tripartite classification of parenting behavior (Steinberg, Dornbusch, and Brown, 1992) first popularized by Schaefer (1965): acceptance/rejection, psychological control/psychological autonomy, and firm control/lax control. Nonetheless, the present study examines only two of these parenting behaviors and uses somewhat different labels for these parenting dimensions than did Schaefer (1965). Steinberg (1990) provided the most comprehensive description of the operation of the two forms of control to be used in the present study and how they differ, both conceptually and empirically, from one another. So, instead of psychological control/psychological

autonomy and firm control/lax control, the terms parental "behavioral control" and "psychological control" are used because, as Barber and his colleagues (2005) supported, these labels better communicate the important distinction between parent control of child or adolescent behavior and parental control of the child's or adolescent's psychological world apparent in Schaefer's original work (1965) and in more recent work (Barber, 1996, 2002).

Behavioral control refers to parental practices that aim to regulate children's behaviors to accord with established family or social norms (Barber, 1996), and involves clear and consistent rules, supervision, and management of behavior. Conversely, psychological control refers to control attempts (e.g., love withdrawal and guilt induction) that "constrain, invalidate, and manipulate a child's psychological and emotional experience and expression" (Barber, 1996), by keeping the child emotionally dependent on the parent through excessive overprotectiveness, or threats to security and self-esteem (e.g., devaluation, shame, and love withdrawal) (Mills & Rubin, 1998); in other words, psychological control refers to parental behaviors that are non-responsive to the psychological and emotional needs of children and adolescents.

Thus, the two forms of control elucidate important distinctions in their definitions. According to Gray and Steinberg (1999) psychological control has to do with "the relative degree of emotional autonomy that the parent allows". This form of control centers on regulation of thoughts, emotions, opinions, and feelings, and communicate to the child or adolescent that these thoughts, emotions, opinions, and feelings he shares are unacceptable (Rogers, Buchanan, & Winchell, 2003). In contrast, behavioral control has to do with "the level of monitoring and limit setting that the parent uses" (Gray & Steinberg, 1999). Behavioral control focuses on behavior regulation but without negating the adolescent's own ideas, feelings, or intrinsic value (Barber, 1996); in

essence, this form of control does not interfere with the adolescent's psychological world; instead, behavioral control communicates to the child or adolescent which of his behaviors and/or activities are unacceptable.

At the heart of the distinction between the two forms of parental control is the notion that behavioral control and psychological control affect individuals in dissimilar ways. Due to the fact that behavioral control, as the label implies, is concerned with the regulation, supervision, and management of behavior, this behavioral regulation serves a positive socializing function. In contrast to this, psychological control refers to control attempts that interfere with adolescent's development of independence. Given that adolescence is a period of increased striving for autonomy and independence, extensive use of parental psychological control is thought to thwart and adversely affect adolescent development by impeding the development of autonomy and self-direction (Barber, 1996; Steinberg, 1990). The relevance of differentiating between behavioral and psychological control extends beyond just a conceptual clarification to demonstrating whether deficiencies in these two areas of socialization lead to different outcomes in children (Barber et al., 1994). Essentially, according to Barber and colleagues, psychological control should be related to mental health difficulties, and behavioral control to facilitating conformity to behavioral norms (Barber, Stolz, Olsen, Collins, & Burchinal, 2005).

Studies which distinguish the effects of parental psychological control and parental behavioral control have mainly found differential associations of parenting with adolescent externalizing and internalizing behaviors (e.g., Barber et al., 1994; Galambos et al., 2003; Gray & Steinberg, 1999; Hoeve et al., 2009; Mills & Rubin, 1998; Pettit et al., 2001). Behavioral under-control has been directly linked with externalizing behaviors such as substance use, antisocial behavior, delinquency, and sexual

precocity (Barber, 1996; Barber et al., 1994; Galambos, et al., 2003; Mills & Rubin, 1998; Pettit et al., 2001). In their study using adolescents and their mothers as participants, Pettit and his colleagues, reported that monitoring was (negatively) related to delinquent behavior (Pettit et al., 2001). Also, Hoeve et al. (2009) obtained similar results in their meta-analysis; poor parental monitoring was relatively strongly linked to delinquency. One explanation for this association may be that uncontrolled environments do not foster self-regulation in children, often leaving them more prone to contravene social norms (Barber, 1996). In contrast, higher psychological control has been traditionally related to internalizing behaviors, such as depression, low self-confidence, and low self-esteem (Pettit et al., 2001). In line with earlier research, Plunkett et al. (2007) found a direct positive path from parental psychological control to depressed mood for adolescent boys (Plunkett et al., 2007). Likewise, Rogers et al. (2003) found existing links between psychological control and internalizing behaviors, both cross-sectionally and longitudinally. One explanation for the link between psychological control and internalizing symptomatology might be that adolescents who experience psychological control may see their parents as being non-responsive to their emotional and psychological needs, and, hinder the adolescents' abilities to trust their own uniqueness and ideas (Barber, 1996). Such an environment which is non-responsive to the adolescent's emotional and psychological needs makes it difficult for a child to develop a positive self-perception for numerous reasons: the implied derogation of the child, the limited opportunities to develop a sense of personal efficacy, and, particularly for adolescents, interference with the exploration needed to establish a stable identity (cited in Barber, 1996).

To sum, existing literatures demonstrate that behavioral control has more prominent associations with externalized problems and that psychological control has

particular effects on internalized problems, and while this has been widely supported, there is also some evidence to suggest that psychological control may be associated with externalizing symptomatology as well (Barber, 1996; Mills & Rubin, 1998; Rogers et al., 2003; Hoeve et al., 2009). For example, in the meta-analysis conducted by Hoeve et al. (2009), it was found that psychological control was at least as important as behavioral control in predicting increased levels of delinquent behaviors (Hoeve et al., 2009). According to Mills and Rubin (1998), the harsh discipline associated with childhood and adolescent aggression often involves verbal hostility such as blaming, deprecation, and derogation. And albeit these psychological control tactics may corrode the positive self-perception of the adolescent, such personal attacks may also lead to aggression by arousing anger. Hence, psychological control may be as important in the development of externalizing behaviors as it is in the development of internalizing symptomatology. Furthermore, Mills and Rubin (1998) found links between excessive behavioral control and the development of internalizing difficulties; from their data, mothers of socially withdrawn children appeared to be behaviorally overcontrolling (Mills & Rubin, 1998). Nevertheless, the fact that most research on behavioral control has focused almost exclusively on the development of externalizing behaviors, makes it difficult to draw any meaningful conclusions regarding its role on the development of internalizing behaviors. These shortcomings in research will be addressed in the present study, aiming to provide an insight into the ways in which behavioral control and psychological control are associated with both externalizing and internalizing behaviors.

In conclusion, numerous parenting studies are consistent in their overall conclusion that adolescents raised in families characterized by an authoritative parenting style (high levels of behavioral monitoring and low levels of psychological control) are behaviorally and psychosocially healthier than their adolescent counterparts raised with

non-authoritative parenting. Relevant to this, the present study hypothesizes that parent control will be significantly related to adolescents' exhibition of externalizing and internalizing behaviors.

2.3.1.2. Parent-Adolescent Conflict

It is now widely acknowledged that the relationship which the child shares with his parents is of critical significance as it forms a foundation for future behaviors and interpersonal relationships. In other words, the quality of the relational bond between parent and child affects children's emotional development, and behavioral and social growth (Driscoll & Pianta, 2006). Traditionally, the principal focus of the majority of research on parent-child relationship has been on mothers (Williams & Kelly, 2005). This has been driven by theoretical principles defining the primary attachment bond as that between the child and its primary caretaker, which is traditionally assumed to be the mother (Bowlby, 1973). Indeed, research has shown that mothers tend to spend more time together with their children than do fathers (Baumrind, 1991; Driscoll & Pianta, 2006; Gryczkowski, et al., 2010). However, the amount of time that fathers dedicate to their children (both absolute and relative to mothers) has increased considerably in the past decades, and, when both parents and child are together, mothers and fathers instigate interaction with children with equal frequency (cited in Driscoll & Pianta, 2006). For adolescence, a time of transformation in an adolescent's life, one area of parenting which reflects important aspects of the parent-adolescent relationship is the conflict domain (Steinberg & Silk, 2002).

Parent-adolescent conflict can be defined as a parent-youth dyadic relationship characterized by overt negativity, such as conflict and hostility (Eichelsheim et al., 2010). A parent-child relationship characterized by conflict involves negative arguing

and dispute, an evident dislike of the child by the parent, and aggressive problem-solving strategies (Ingoldsby et al., 2006). Parent-child conflict during adolescence is more likely to include negative verbal exchanges instead of negative physical exchanges (Smetana, 1989). The primary topics of parent-adolescent conflict are about routine activities, for instance homework, academic performance, curfews, watching television (Adams & Laursen, 2001; Allison & Schultz, 2003), as well as about chores, appearance, politeness, finances (Galambos & Almeida, 1992), and more infrequently about autonomy and independence, parent control, and personal ethical beliefs (Allison & Schultz, 2003). Researchers interested in examining parent-adolescent conflict have researched conflict in terms of frequency or in terms of intensity (e.g. Galambos & Almeida; Holmes, Bond, & Byrne, 2008). In their meta-analysis, Laursen, Coy, and Collins (1998) found that whereas conflict frequency decreased over the course of adolescence, conflict intensity intensified over the course of adolescence reaching its peak in middle-to-late adolescence (Laursen et al., 1998).

Relevant to the present study, researchers consider conflict to be an important aspect of childrens' and adolescents' socialization; it is often found to be a predictor of adolescent externalizing symptomatology (Buehler, 2006; Eichelsheim et al., 2010; Marmorstein & Iacono, 2004; Zadeh et al., 2010). In their study, Galambos, Sears, Almeida, and Kolaric (1995) reported that the intensity of parent-adolescent conflict was related to higher levels of youth externalizing behaviors, even when prior behavior problems were controlled for (Galambos et al., 1995). Likewise, Eichelsheim et al. (2010) found that the negative quality of the parent-adolescent relationship, characterized by recurrent discord and quarrels between the parent and the adolescent, was strongly related to the adolescents' levels of aggression, concluding that the

negative and coercive interaction patterns in the parent-adolescent relationship seem to spill over directly into adolescent interpersonal aggression (Eichelsheim et al., 2010).

Furthermore, it has also been argued that a positive association between dyadic hostility and youth internalizing problems may be present. This association may exist as the critical aspect of hostility might corrode self-esteem and contribute to internalizing symptoms, such as depression and anxiety (Shagle & Barber, 1993). Nevertheless, findings have been unable to offer concrete conclusions; Marmorstein and Iacono (2004) concluded that adolescents' internalizing psychopathology such as Major Depression Disorder (MDD) was associated with high levels of parent-youth conflict, a finding supported by other research as well; for example, Shek (1998) found that parent-adolescent conflict was concurrently associated with adolescent psychological well-being, with father-adolescent conflict exerting a stronger influence on adolescent well-being than mother-adolescent conflict. Nonetheless, the opposite effect was found in other studies wherein dyadic hostility was not associated with youth internalizing symptoms (e.g., Buehler, 2006).

To sum, examining parent-adolescent conflict is considered important; research conclusions have implications for therapeutic intervention programmes. For example, findings of an association between parent-adolescent conflict and externalizing behaviors for instance, suggest a focus on the interactions between parents and adolescents, rather than on either person individually (Zadeh et al., 2010). Furthermore, research will offer more insights into areas where findings have been inconclusive.

2.3.2. Psychopathic Traits

The association between ineffective parenting and children's externalizing and internalizing behaviors is well documented throughout the many years of research in the

parenting domain (e.g. Barber et al., 1994; Buehler, 2006; Eichelsheim et al., 2010; Galambos et al., 2003; Gray & Steinberg, 1999; Hoeve et al., 2009; Marmorstein & Iacono, 2004; Mills & Rubin, 1998; Pettit et al., 2001; Plunkett et al., 2007; Zadeh et al., 2010). Nevertheless, researchers now also recognize that the relationship between coercive parent-child exchanges and the development of behavior problems may be stronger for certain children (Kochanska et al., 2013; Oxford et al., 2003). Although there is a general consensus in Developmental Psychology and Developmental Psychopathology that intrapersonal and interpersonal factors in their interplay determine adaptive or maladaptive outcomes in children and adolescents, certain areas of study have not received substantial attention; for example, only a few studies have focused on psychopathic features of adolescents and parenting behavior and their relative contribution to the exhibition of externalizing and internalizing behaviors.

Psychopathy is conceptualized as a distinct constellation of affective, interpersonal, and behavioral features (Cleckley, 1976; Hare, 1999; Marsee et al., 2005). According to Cleckleys' (1976) classical observations, the affective characteristics of the psychopathic personality are defined by callousness, and a lack of empathy and remorse. The interpersonal characteristics include narcissism, superficial charm, egocentricity and glibness. Behaviorally, the psychopathic personality is described as impulsive, irresponsible, and prone to novelty seeking (cited in Feilhauer & Cima, 2013). Although psychopathy is often treated as a unitary construct, there is evidence of separable dimensions related to core affective–interpersonal features (e.g., callousness, grandiosity) and lifestyle–behavioral features (e.g., impulsivity) (Edens et al, 2008; Feilhauer & Cima, 2013). As a concept, psychopathy is useful in describing a unique subgroup of antisocial adults (Hare, 1999), for identifying severely violent and disruptive

adults in the criminal justice system, and has also proven to be useful for predicting violent recidivism upon release from prison (cited in Marsee et al., 2005).

Over the last decades, there have been a number of efforts to extend the construct of psychopathy to children and adolescents. Such attempts though, involve a number of ethical issues, such as the possible effects of labeling a child ‘‘psychopathic’’; developmental issues, such as that some level of psychopathic traits is considered normative in youth; and methodological issues, such as choosing the optimal methods of assessment for these traits in children and adolescents (Marsee et al., 2005). Albeit the issues that arise, extending research to youth has been promising. First and foremost, psychopathic traits have been shown to be moderately to highly stable during childhood and adolescence (Barry, Barry, Deming, & Lochman, 2008; Frick, Kimonis, Dandreaux, & Farell, 2003; Frick & White, 2008; Lynam et al., 2009; Muñoz & Frick, 2007). In one study, Lynam et al. (2009) found stability to be quite high across 6-month, one-year, two-year, and five-year periods, and additionally, there was no evidence for change across childhood and adolescence in the levels of stability. These findings, along with other work (e.g. Barry et al., 2008; Frick et al., 2003; Frick & White, 2008; Muñoz & Frick, 2007), have very straightforward implications – especially in regards to the raised concerns that developmentally normative changes in certain traits might masquerade as psychopathy or make the assessment of psychopathy prohibitively difficult (cited in Lynam et al., 2009), – suggesting that juvenile psychopathy is fairly stable across adolescence. In addition, Blonigen, Hicks, Kruger, Patrick, and Iacono (2006) reported that the C-U dimension was relatively stable from late adolescence (age 17) into early adulthood (age 24). Along with similar work (e.g. Burke, Loeber, & Lahey, 2007; Lynam et al., 2009), such a finding, provides support for the stability of these traits from childhood or adolescence into adulthood. Further evidence favoring the

efforts to extend the construct of psychopathy to children and adolescents comes from a number of studies which evidence that the child psychopathy *trifecta* of C-U traits, narcissism, and impulsivity correlate with measures of antisocial behavior. For instance, Frick, Stickle, Dandreaux, Farrell, and Kimonis (2005) found psychopathic traits to predict severe and stable conduct problems and delinquency over the four year follow-up period. Even though these findings provide support for the continued study of psychopathic traits in the youth population, it remains that knowledge on which dimension or dimensions of psychopathy are most strongly associated with externalizing and internalizing behaviors is limited. Even though the occurrence of callous-unemotional (C-U) traits has received considerably much attention in research using child and adolescent samples, the contribution of the remaining psychopathy dimensions still remains unclear (Feilhauer & Cima, 2013; Marsee et al., 2005) even though research regarding the other psychopathy dimensions is now significantly flourishing. Obtaining additional knowledge relevant to psychopathic traits is an important step in expanding our understanding of psychopathy, as well as aiding in the development of successful treatment programmes.

In recent years, research on the correlates and consequences of psychopathy in the youth population has increased precipitously (Edens et al., 2008); surprisingly however, only a minimum of studies have focused on adolescents' psychopathic features and parenting behavior. A question one might pose is how psychopathic traits relate to parenting factors and externalizing and internalizing behaviors. One explanation is that children who show evidence of psychopathic traits are less responsive to parenting practices that might otherwise be effective in shielding behavior problems (Edens et al., 2008). Although this proposition is sensible and offers an understanding as to why some adolescents do not respond to parent rearing practices,

most of research regarding the moderation role of psychopathic traits has focused mainly on the presence of C-U traits, resulting in a gap in knowledge regarding the remaining psychopathic features; narcissism and impulsivity.

The three psychopathic traits which will serve as moderators in the present study will be callous-unemotional (C-U) traits, narcissism, and impulsiveness. The following section centers on the relationship between these three psychopathic traits and parenting aspects, with an aim to provide an understanding of the ways that these factors are differentially related to externalizing and internalizing behavior problems.

2.3.2.1. Callous-Unemotional [C-U] Traits

Callous-Unemotional (C-U) traits refer to a specific affective and interpersonal style. The affective characteristics of C-U traits are defined by absence of guilt, and constricted display of emotion, whereas the interpersonal characteristics include failure to show empathy, and callous use of others for one's own gain (Fanti et al., 2009; Frick & White, 2008). C-U traits, considered to be hallmark of the construct of psychopathy (Cleckley, 1976), have been shown to be relatively stable throughout childhood and adolescence (Barry et al., 2008; Frick et al., 2003; Frick & White, 2008; Lynam et al., 2009; Muñoz & Frick, 2007), and from childhood or adolescence into adulthood (Blonigen et al. 2006; Burke et al. 2007; Lynam et al., 2009).

One of the most essential and advantageous aspects of the construct of psychopathy has been its ability to designate a particularly aggressive and chronic subgroup of antisocial individuals (Frick & White, 2008). In a review of 24 published studies of child or adolescent samples, Frick and Dickens (2006) reported that psychopathic traits in general, or C-U traits specifically, were correlated with severe conduct problems, and delinquent or aggressive behaviors. Of the 24 studies, 10 were

cross-sectional studies and 14 were longitudinal studies. The findings from the cross-sectional studies help demonstrate contemporaneous associations between C-U traits and antisocial behavior (e.g., conduct problems, delinquency, and aggression), whereas the findings from the 12 longitudinal studies demonstrate predictive associations between these two constructs (Frick & Dickens, 2006). Additional support in relation to correlations of C-U traits with measures of conduct problems and psychosocial impairment has been documented; for example, in one study, Essau and colleagues (2006) examined the correlates of the Inventory of Callous-Unemotional Traits (ICU) scale (Frick, 2004) in 1443 adolescents. The researchers found that increasing levels of callousness, uncaring, and unemotionality provided a unique contribution in predicting externalizing behaviors; in regards to internalizing behaviors, the callousness trait was modestly correlated with the internalizing composite of the Youth Self-Report (YSR; Achenbach, 1991) (Essau et al., 2006).

Furthermore, as mentioned in previous sections (see chapter 1, section 1.2.; chapter 2, sections 2.1., 2.3., 2.3.2.), although the association between inefficient parenting and children's externalizing and internalizing behaviors is established by research (e.g., Barber et al., 1994; Buehler, 2006; Eichelsheim et al., 2010; Galambos et al., 2003; Gray & Steinberg, 1999; Hoeve et al., 2009; Marmorstein & Iacono, 2004; Miller et al., 2009; Mills & Rubin, 1998; Muris et al., 2003; Pettit et al., 2001; Richaud de Minzi, 2010; Shagle & Barber, 1993; Shek, 1998; Zadeh et al., 2010), this association may be truer for some youths than others. Indeed, research findings indicate that certain traits may influence the degree to which children or adolescents are responsive to parents' socialization efforts (cited in Oxford et al., 2003). Studies suggesting a moderating role for C-U traits have offered promising findings (e.g., Edens et al., 2008; Kochanska et al., 2013; Kroneman et al., 2011; Pasalich et al., 2011). In one study,

researchers concluded stronger associations between ineffective parenting practices and externalizing behaviors in children with low C-U traits compared with high C-U children. In particular, negative parenting was positively related to conduct problems in participants with low levels of C-U traits. Additionally, C-U traits significantly moderated the link between parental warmth and conduct problems; parental warmth was negatively related to conduct problems only in children with high levels of C-U traits (Pasalich et al., 2011). Likewise, in an other study, researchers found that, in a sample of 1,233 female participants, low levels of parental warmth were more strongly associated to Oppositional Defiant Disorder/Conduct Disorder (ODD/CD) symptoms in girls with high versus low levels of C-U features (Kroneman et al., 2011).

Most of research has focused on the relationship – either be direct or indirect – between C-U traits and externalizing behaviors, supporting the notion that this facet of psychopathic traits links with behavior problems. Research on the association between C-U traits and internalizing behaviors, however, has not received considerable attention. This issue will be addressed in the present study.

2.3.2.2. Narcissism

Narcissism refers to a “pervasive pattern of grandiosity” that is characterized by arrogant behaviors, feelings of entitlement and superiority, and a lack of empathy for or concern about others (cited in Horton et al., 2006). Despite the fact that narcissism is a relatively neglected construct, high narcissism is considered pathological and has been an important predictor of externalizing (Kerig & Stellwagen, 2009; Marsee et al., 2005; Washburn et al., 2004) and internalizing problems (Barry & Malkin, 2010; Washburn et al., 2004).

Conventional ideas assume an association between low self-esteem and aggression (cited in Wasburn et al., 2004). Central to this view is the infamous notion of self-esteem as an unmitigated good and as a “cure” for various personal and social problems. Accordingly, certain people are prompted by their low self-esteem and inner self-doubt to act violently towards other people, possibly as means of gaining self-esteem (cited in Bushman & Baumeister, 1998). Threatened egotism theory (Baumeister, Smart, & Boden, 1996) challenges these notions. According to the threatened egotism theory (Baumeister et al., 1996), violent behavior is not related to low self-esteem; instead, violent behavior is related to a greatly favorable view of the self, combined with an ego threat. In other words, aggressive behavior is more likely among people with exceptionally high self-esteem than people with low self-esteem, particularly if faced with a threat to their overly positive self-view (Washburn et al., 2004). However, this proposition should be interpreted with caution as it does not assume that all people with high self-esteem will act aggressively; instead, it is specific to individuals with fragile and unstable self-esteem, such as people with narcissism (Bushman and Baumeister, 1998). While narcissistic individuals may perceive themselves as exceedingly favorable, their sense of self is also highly vulnerable. To this end, as individuals with high narcissism are vastly motivated to strengthen and maintain their narcissistic self-view through various interpersonal or intrapersonal mechanisms, when faced with an ego threat which results in their self-view to be challenged, such individuals may become increasingly vulnerable and act aggressively, both as a mechanism to re-establish their self-esteem and/or to punish the specific source of the threat (Baumeister et al., 1996; Bushman and Baumeister, 1998). Empirical evidence supports this argument (Ha, Petersen, & Sharp, 2008; Kerig & Stellwagen, 2010; Kerr, Zalk, & Stattin, 2012; Marsee et al., 2005; Washburn et al.,

2004); in one study, Ha et al. (2008) investigated the relationships between narcissism, self-esteem and conduct problems in a sample of pre-adolescent and young adolescent children, and found that narcissism is associated with conduct problems (Ha et al., 2008). Likewise, Marsee et al. (2005) examined the association of psychopathic traits – C-U traits, narcissism, and impulsivity – with aggression and delinquency in a non-referred sample of students, and concluded that psychopathic traits were associated with externalizing behaviors. Interestingly, all three aspects of psychopathy – C-U traits, narcissism, and impulsivity – showed relatively similar associations with externalizing behaviors. These findings do not accord with research wherein the callous–unemotional dimension seemed to be most significant predictor for severe aggression, conduct problems, and delinquency (cited in Marsee et al., 2005). Consequently, support for the inclusion of the remaining aspects of psychopathy – narcissism and impulsivity – in relevant research is reinforced and supported.

In addition to externalizing behaviors, could there be an association between narcissism and internalizing behavior problems? And if such an association exists, how would one explain this relationship? As is known, narcissism is undoubtedly associated with a propensity to engage in self-enhancement in a way that appears congruent with self-assuredness and inconsistent with feelings of anxiety (cited in Barry & Malkin, 2010). Nevertheless, it is also argued that, despite the sanguine, grandiose, presentations of narcissistic individuals, a narcissistic presentation masks an underlying self-doubting, unconfident, and anxious self-perception (cited in Barry & Malkin, 2010). Indeed, self-psychology theorists posit that feelings of depression and negative self-perceptions underlie the exaggerated and fragile sense of self in narcissism (cited in Washburn et al., 2004). From this perspective, Kohut argues, narcissistic reactions are conceptualized as a defence against depressive affect and cognition (as cited in

Washburn et al., 2004). So, on the one hand, narcissism is associated with a propensity to engage in self-enhancement in a way that accords with self-assuredness, but also with a tendency to engage in protection-oriented strategies (e.g., seeking positive feedback) that are suggestive of anxiety and insecurity (Hepper, Gramzow, & Sedikides, 2010). Apart from a potentially causative factor in narcissistic reactions, there is also a proposition wherein internalizing symptoms may also *result* from narcissistic behavior (Washburn et al., 2004). According to Morf and Rhodewalt (2001), the unempathic strategies employed by narcissistic individuals when wanting to obtain external affirmation may result in interpersonal interactions and emotions characterized by negativity. Nevertheless, there are only but a few research studies on internalizing behaviors as associated features of narcissism and the existing evidence is mixed. Even though research has found high levels narcissism to be a symptom of underlying, relatively automatic negative self-views in adults (Jordan et al., 2003), other evidence reported the opposite. In support of the first argument, Washburn et al. (2004) found that there was a positive association between narcissistic exhibitionism and internalizing symptoms in pre-adolescent and adolescent samples. Although this conclusion was not supported by previous research with adults (e.g., Rhodewalt & Morf, 1998) it can be explained using Morf and Rhodewalt's (2001) model. According to the model, the self-regulatory strategies employed by people with narcissism are often risky, socially inappropriate, and insensitive. As a result, while these strategies may help people with narcissism achieve the immediate desired need for attention, ultimately they may prove insufficient in validating a grandiose construction of self (Washburn et al., 2004). In one other study, Barry and Malkin (2010) investigated the association between adolescent narcissism and internalizing problems and concluded that even though some forms of narcissism correspond to feelings of depression and anxiety in adolescents, this pattern

is not uniform across narcissistic features. Specifically, psychopathy-linked narcissism was positively associated with internalizing problems; in contrast, adaptive narcissism was negatively associated with self-reported internalizing problems. As very few research studies exist investigating a connection between narcissism and internalizing problems in adolescence, and considering that, based on increasing research evidence, narcissism appears to have psychosocial relevance prior to adulthood (Barry & Malkin, 2010), additional research on the construct of narcissism and its correlates across the adolescent period would further advance our understanding of its relative significance in psychological functioning. Recent empirical investigations have also turned their focus of attention to environmental factors that contribute to narcissism development, and to this end, narcissism has been associated with parenting behavior. For example, research found that psychological control was positively associated to unhealthy narcissism; in other words, higher use of psychological control was related to higher unhealthy narcissism. Likewise, monitoring was negatively predictive of unhealthy narcissism, meaning that, the less monitoring the participants reported from their parents, the higher the narcissism scores tended to be (Horton et al., 2006). One limitation posed by the researchers is the lack of consideration of a reverse relation between narcissism and parenting (Horton et al., 2006). That is, there is lack of consideration of the possibility that narcissistic children may engender from their parents unique parenting responses; for example, children high in unhealthy narcissism, may engender from their parents psychological control tactics as the parents try to regulate the child's behavior (Horton et al., 2006). Moreover, to my knowledge, the moderation effect of narcissism when studying the association of parenting and externalizing and internalizing behaviors has not been investigated. One study that did investigate the moderator effects of psychopathic features in the relationship between

parent rearing practices and adolescent antisocial behavior, concluded that harsh and inconsistent discipline was predictive of adolescent conduct problems only for those high in interpersonal features of psychopathy (Edens et al., 2008).

As there are only but a minimal number of studies on the direct and indirect paths through which narcissism associates with adolescents' exhibition of externalizing and internalizing behaviors, this makes it difficult to draw any meaningful conclusions about any kind of an association. The present research attempts to fill this gap.

2.3.2.3. Impulsivity

Impulsivity, a multidimensional concept, involves the tendency to act quickly and without reflection, handling of different emotions, rapid processing of information, novelty seeking, and ability to delay gratification (Ramírez & Andreu, 2006). As a concept, it is one of the strongest personality correlates of numerous psychological and psychiatric disorders, such as externalizing behaviors, attention deficit hyperactivity disorder (ADHD), mania, and substance-related problems (cited in Cosi et al., 2011).

Impulsivity relates – to a large degree – to the prediction of several behavior problems, such as interpersonal aggression, and criminality (cited in Hoaken, Shaughnessy, & Phil, 2003). It has been linked to persistent delinquent behaviors across the adolescent years; for example, higher levels of impulsivity was a trait found to be associated to adolescents who show physical aggression, theft or vandalism persistent trajectory (Carrasco, Barket, Tremblay, & Vitaro, 2006). In agreement with earlier research (e.g., Carrasco et al., 2006), in their study using youths as participants, Neumann, Barker, Koot, and Maughan (2010), found adolescent impulsivity and antisocial behavior to be strongly associated; in other words, the higher the levels of impulsivity participants displayed, the more antisocial behavior they exhibited.

Despite the contribution of impulsivity in our understanding of the development of externalizing behaviors, there are only but a few references in the literature relating impulsivity and internalizing psycholopathology (Cosi et al., 2011; Costello et al., 2004). Even though there is some evidence to suggest impulsivity is related to unipolar depression in adulthood (Granö et al., 2007), there is a lack of studies in the childhood and/or adolescent populations relating depression and anxiety to impulsivity (Costello et al., 2004). One exception is a study conducted by Cataldo, Nobile, Lorusso, Battaglia, and Molteni (2005); in the study, researchers examined impulsivity in depressed children and adolescents, and concluded that, depressed participants were rated by their parents as being significantly more impulsive than controls (Cataldo et al., 2005). Similarly, Cosi et al. (2011) aimed to examine the relationship between impulsivity and internalizing behaviors in a sample of children and young adolescents. Their results showed that the component of impulsivity that is most related to anxiety and depression is motor impulsivity (= tendency to act on the spur of the moment), which seems to reflect the more pathological aspect of impulsivity (Cosi et al., 2011). Their findings support the idea that impulsivity is an important risk factor in internalizing behaviors as well, and, that impulsivity is an important personality dimension to be considered in child psychopathology (Cosi et al., 2011); this provides additional support for the continued use of research between impulsivity and externalizing and internalizing behaviors.

As research – and consistent to Bronfenbrenner's (1997) ecological model – is beginning to show, temperamental characteristics and parental factors interact in determining human development. Relevant to this proposition and the moderator effect of impulsivity, Bates, Pettit, Dodge, and Ridge (1998) concluded that child impulsive temperament was more strongly related to later externalizing behaviors when parents used unrestrictive, non-controlling parenting strategies. Additionally, a number of

studies also established the moderating role of impulsivity between parenting factors and externalizing behaviors (e.g., Lengua et al., 2000; Leve et al., 2005). For example, according to Leve et al. (2005), impulsivity moderated the relationship between parental discipline and externalizing behaviors; in other words, the relationship between harsh parental discipline and externalizing behaviors was true only for girls with high impulsivity. Likewise, important findings were reported by Lengua and colleagues (2000). As expected, inconsistent discipline was more strongly related to conduct problems for children who were high in impulsivity. One explanation for this relationship may be that children high in impulsivity are more vulnerable to the effects of parental inconsistency in parental control tactics (e.g., setting limits) because, compared with less impulsive children, they experience difficulties in regulating their emotions and behaviors on their own. For that reason, without parental control, impulsive children may be more susceptible in developing conduct problems. Another important finding was the interaction of impulsivity and inconsistent discipline in predicting depression; in other words, inconsistent discipline was more strongly related to depression for children high in impulsivity. This relationship may exist as, for children with impulsivity inconsistent parenting is related to greater difficulty with behavioral regulation. This, in turn, may lead to negative interactions with other people from the child's close environment (e.g., parents, teachers, and peers), which may result in low self-esteem, social withdrawal, and depression (Lengua et al., 2010).

Considering the importance of impulsivity – either directly or indirectly – for the prediction of behavior problems, as well as the relevant gaps in research, the present research study aims to address such issues, by considering the moderating effect of impulsivity in the relationship between parental factors and externalizing and internalizing behavior problems.

2.4. Limitations of past research

Even though research in Child Psychology and Child Psychopathology has advanced our understanding a great deal in relation to externalizing and internalizing behaviors, there are – undoubtedly – a number of gaps in literature. Such gaps are important to be studied; otherwise, this limits the power of the conclusions about the magnitude of any links currently found.

First, one important limitation of past research is the systematic neglect and exclusion of fathers in the study of childrens' and adolescents' development. Even though empirical interest in the father-child relationship is considerably increasing, it is still the case that research often disregards the importance of fathers within multiple family contexts, and so, fathers are still underrepresented in most studies of child development (Schacht et al., 2009). In relation to this, a recent meta-analysis concluded that, compared to the studying of the parenting behavior of mothers, less than 20% of the studies focused on the parenting behavior of fathers, despite the fact that specific paternal parenting behaviors had a larger effect than maternal parenting behaviors (Hoeve et al., 2009). Indeed, the few studies that concentrate exclusively on the father figure indicate that paternal behaviors are particularly important for childrens' and adolescents' adjustment (e.g. Buist et al., 2004; Gryczkowski et al., 2010). Moreover, in the past decades, fathers have become increasingly more involved in the lives of their children. Consequently, the inclusion of fathers in parenting research is supported and is considered vital in order to gain more concrete conclusions to questions such as how *parent practices* are related to the behavior difficulties of their adolescent children (Pleck & Masciadrelli, 2004).

A second gap in research regards psychopathic traits. It remains that knowledge on which dimension or dimensions of psychopathy are most strongly associated with

externalizing and internalizing behaviors is limited. The reason for this is that the investigation of callous-unemotional (C-U) traits has received considerably much more attention in research using child and adolescent samples than the remaining dimensions of psychopathy (= narcissism, impulsivity), and so, the contribution of the remaining psychopathy dimensions still remains unclear (Feilhauer & Cima, 2013; Marsee et al., 2005). An important advancement in research regards the considerable research interest of the contribution of the other psychopathy dimensions to experiences of externalizing and internalizing behaviors (e.g., Carrasco et al., 2006; Cosi et al., 2011; Kerig & Stellwagen, 2010; Kerr et al., 2012; Neumann et al., 2010). This is a strength as it will offer a much better insight into the significance of all three dimensions of the construct of psychopathy; one study which supports the inclusion of all three facets of psychopathy in research is Marsee et al.'s (2005) study who examined the association of psychopathic traits – C-U traits, narcissism, and impulsivity – with aggression and delinquency, and concluded that all three aspects of psychopathy showed relatively similar associations with externalizing behaviors. These findings reinforce and support the examination of all aspects of psychopathy in relevant research, and thus, future research should not neglect either dimension of psychopathy.

Thirdly, although research has contributed significantly in our understanding of the relevant contribution of parenting factors for externalizing and internalizing behaviors, as well as of the relevant contribution of psychopathic traits for externalizing behaviors, there is only but a minimum of studies in the literature in relation to psychopathic traits and internalizing behaviors, and some of the studies that do exist have offered mixed results. For example, in their study, Washburn et al. (2004) found a positive association between narcissistic exhibitionism and internalizing symptoms in pre-adolescent and adolescent samples, whereas the opposite was concluded by Barry and Malkin (2010)

who reported that adaptive narcissism was negatively associated with self-reported internalizing problems. As very little research exists concerning a connection between psychopathic traits and internalizing problems – either directly or indirectly – across the adolescent period, further research would contribute greatly both empirically and will have practical implications as well.

Finally, in regards to the dimension of impulsivity, a limitation has been that it either used only paper-and-pencil questionnaires or behavioral measures of impulsivity in previous research. Despite the strengths of using quantitative measures, among the weaknesses are the self-awareness and possible demand characteristics issues that arise, issues which are known to bias the findings of research. Alternatively, laboratory measures are unaffected by these self-awareness and demand characteristics issues. Therefore, this highlights the need for multi-method assessments that consider how the adolescent behaves in the real-world setting; failing to do so could result in a failure to identify a problem that exists in real-world settings. Research that employs the quasi-experimental method as an addition to paper-and-pencil questionnaires serves to provide more concrete conclusions about impulsivity, which in turn, will add more reliability, validity and credibility to findings.

By taking all these points into consideration and in an attempt to overcome these gaps in literature, the present study will address these issues. Doing so will constitute important methodological avenues for future research, as well as, provide novel approaches in parent training, prevention, and intervention programmes.

3. CHAPTER 3 – Method

3.1. Phase I – Full-Sample Study

3.1.1. Participants

The target population for the present research study is adolescent students who attend the 4th, 5th, and 6th grades of secondary school, as well as their mothers and fathers. To conduct the data collection process, 9 secondary schools were randomly chosen from two provinces in Cyprus, the capital – Nicosia, and Limassol. For information purposes, it is noted that according to the official data from the Statistical Service of the Cyprus Government (CYSTAT, 2010-2011), in the academic year of 2010-2011, 32,760 students attended the 4th, 5th, and 6th grades of secondary schools in Cyprus. From those 32,760 students, 22,438 students (68,5%) attended public secondary schools in urban areas, 4,995 students (15,3%) attended secondary private schools, 4,139 students (12,6%) attended secondary technical schools, and 1,188 students (3,6%) attended public secondary schools in rural areas. To this end, for the purposes of the data collection process of the current research study, 6 public schools in urban areas, 1 private school, 1 technical school, and 1 public school in a rural area were contacted for participation and, in total, eight schools agreed to participate in the study.

The adolescent students who participated in the study met the following criteria: 1) they were students of lyceum (grades 4th, 5th, and 6th of secondary education) whose classes were randomly chosen, and 2) their parents/legal guardians consented (via a written consent form) for their adolescent child to take part in the study. Additionally, for the current purposes of the study, only adolescent students whose parents also participated in the study – by completing their respective questionnaires – were included in the analysis. Accordingly, the sample for the first phase of the study included five hundred and thirty eight adolescent students (mean age, 16.01 years, SD = .88 years).

Both male and female adolescent students were represented in the sample; 41,1% (*N* = 221; mean age, 15.95 years, SD = .87 years) of the sample consisted of male adolescent students and 58,9% (*N* = 317; mean age, 16,06 years, SD = .88 years) of the sample consisted of female adolescent students. The participants were 189 4th grade students, 177 5th grade students, and 172 6th grade students (35%, 32,9%, and 32%, respectively). Table 3.1 presents the number of students who participated in the study, in regards to their gender and grade. Similar to the official data from the Statistical Service of the Cyprus Government, the majority of adolescent participants were students attending public secondary schools in urban areas (N = 401, 74,5% of the sample), followed by students who attend secondary private schools (N = 86, 16% of the sample), secondary technical schools (N = 30, 5,6% of the sample), and public secondary schools in rural areas (N = 21, 3,9% of the sample). The number of student participants in regards to their gender and type of school they attend are presented in Table 3.2. Although, at first glance, there are some discrepancies in comparison to the official data from the Statistical Service of the Cyprus Government, nevertheless, when the data is compared by gender, they seem to be congruent (for male students: public schools in urban areas, 70,6% [CYSTAT, 60,1%]; private school, 16,3% [CYSTAT, 15,7%]; technical school, 8,6% [CYSTAT, 20,9%]; and public school in a rural area, 4,5% [CYSTAT, 3,3%]; for female students: public schools in urban areas, 77,3% [CYSTAT, 75,1%]; private school, 15,8% [CYSTAT, 16,9%]; technical school, 3,5% [CYSTAT, 4,2%]; and public school in a rural area, 3,5% [CYSTAT, 3,9%]). To this end, it can be argued that the data from the present study is representative of the number of students who attend the 4th, 5th, and 6th grades of secondary education in Cyprus.

In addition to student participants, nine hundred and seventy seven parents responded positively and completed the questionnaires. More specifically, from the 538

students that were included in the analysis, 86,2% fathers and 95,4% mothers returned the questionnaires completed. In essence, the parents who participated in the study were 464 fathers (47,5% of the parental sample; mean age, 47.63 years, SD = 5.10 years) and 513 mothers (52,5% of the parental sample; mean age, 44.25 years, SD = 4.73 years). For information purposes solely, parents also provided information in regards to their marital status and level of education. From the fathers that did provide information regarding their marital status (N= 461), 3 (0,7%) were single, 433 (93,9%) were married, 20 (4,3%) were divorced, 3 (0,7%) were widowed, and 2 (0,4%) specified "other" marital status relationship (e.g., separated). From the mothers that did provide information regarding their marital status (N= 511), 2 (0,4%) were single, 448 (87,7%) were married, 46 (9%) were divorced, 9 (1,8%) were widowed, and 6 (1,1%) specified "other" marital status relationship (e.g., separated). As regards their level of education, from the fathers that did provide information (N = 455), 159 (34,9%) graduated from lyceum, 195 (42,9%) graduated from university, 91 (20%) obtained a Master's degree, 7 (1,5%) obtained a PhD/Doctorate, and 3 (0,7%) specified "other" educational level background (e.g., gymnasium). From the mothers that did provide information (N = 504), 138 (27,4%) graduated from lyceum, 259 (51,4%) graduated from university, 92 (18,3%) obtained a Master's degree, 6 (1,2%) obtained a PhD/Doctorate, and 9 (1,8%) specified "other" educational level background (e.g., gymnasium).

Table 3.1. – Number of adolescent students who participated in the first phase of the study, according to their gender and grade (percentages in brackets)

		GRADE			
		4th Grade	5th Grade	6th Grade	**Total**
GENDER	Male	83 (37,6%)	77 (34,8%)	61 (27,6%)	221 (41,1%)
	Female	106 (33,4%)	100 (31,6%)	111 (35%)	317 (58,9%)
	TOTAL	189 (35,1%)	177 (32,9%)	172 (32%)	538 (100%)

Table 3.2. – Number of adolescent students who participated in the first phase of the study, according to the type of school they attend (percentages in brackets)

		TYPE OF SCHOOL				
		Public School – Urban Area	Private School	Technical School	Public School – Rural Area	**Total**
GENDER	Male	156 (70,6%)	36 (16,3%)	19 (8,6%)	10 (4,5%)	221 (41,1%)
	Female	245 (77,3%)	50 (15,7%)	11 (3,5%)	11 (3,5%)	317 (58,9%)
	TOTAL	401 (74,5%)	86 (16%)	30 (5,6%)	21 (3,9%)	538 (100%)

3.1.2. Measures

For the successful completion of the current research study, data was collected from the adolescent students as well as their parents. Both the adolescents' mothers *and* fathers were included in the data collection process.

3.1.2.1. Adolescent data collection

Demographic Data

Adolescent students were required to give some data in relation to their gender, age, and place of residence, as well as information about the level of education and occupation of both their father and mother, respectively (see Appendix A).

Psychopathic Traits

Youth Psychopathic Traits Inventory: The Youth Psychopathic Traits Inventory (YPI; Andershed, Kerr, Stattin, & Levander, 2002) was used to assess psychopathy among youth (see Appendix B). The scale consists of fifty (50) items to which adolescents indicate, on a 4-point Likert-type scale ranging from "*does not apply at all*" (1) to "*applies very well*" (5), the degree to which each statement reflects how they most often think and feel.

The YPI consists of ten subscales designed to capture "core" traits included in the Revised Psychopathy Checklist (PCL-R; Hare, 1991, 2003), the measure which has become viewed as the gold standard for assessing adult psychopathy (Skeem & Cauffman, 2003):

- Dishonest charm, e.g., "It's easy for me to charm and seduce others to get what I want from them";
- Grandiosity, e.g., "I'm more important and valuable than other people";

❖ Lying, e.g., "Sometimes I find myself lying without any particular reason";

❖ Manipulation, e.g., "I am good at getting people to believe in me when I make something up";

❖ Remorselessness, e.g., "To feel guilty and remorseful about things you have done that have hurt other people is a sign of weakness";

❖ Unemotionality, e.g., "I don't understand how people can be touched enough to cry by looking at things on TV or movie";

❖ Callousness, e.g., "I think that crying is a sign of weakness, even if no one sees you";

❖ Thrill seeking, e.g., "I like to do exciting and dangerous things, even if it is forbidden or illegal";

❖ Impulsiveness, e.g., "It often happens that I talk first and think later"; and,

❖ Irresponsibility, e.g., "I often don't/didn't have my school or work assignments done on time."

Additionally, the ten subscales of the YPI have been shown to conform very well with the hypothesized three-factor construct of psychopathic personality disorder, which consists of a constellation of interpersonal, affective, and behavioral traits (see Cook & Michie, 2001). The three-factor structure consists of:

❖ The Grandiose/Manipulative Dimension (GM; Interpersonal), including the subscales Dishonest Charm (e.g., "It's easy for me to charm and seduce others to get what I want from them"), Grandiosity (e.g., "I'm more important and valuable than other people"), Lying (e.g., "Sometimes I find myself lying without any particular reason"), and Manipulation (e.g., "I am good at getting people to believe in me when I make something up");

❖ Callous/Unemotional Dimension (CU; Affective), including the subscales Callousness (e.g., "I think that crying is a sign of weakness, even if no one sees you"), Unemotionality (e.g., "I don't understand how people can be touched enough to cry by looking at things on TV or movie"), and Remorselessness, (e.g., "To feel guilty and remorseful about things you have done that have hurt other people is a sign of weakness"); and,

❖ Impulsive Irresponsible Dimension (II; Behavioral), including the subscales Impulsiveness (e.g., "It often happens that I talk first and think later"), Thrill-Seeking (e.g., "I like to do exciting and dangerous things, even if it is forbidden or illegal"), and Irresponsibility (e.g., "I often don't/didn't have my school or work assignments done on time.").

The YPI has been shown to have high internal consistency (Andershed, Hodgins, & Tengström, 2007; Skeem & Cauffman, 2003). In their study, Skeem and Cauffman (2003) reported satisfactory internal consistency values (Cronbach alpha coefficients) of the three subscales; GM (α = .90), CU (α = .77), and II (α = .83), and for the total YPI scale (α = .92). Additionally, Andershed et al. (2007) also reported satisfactory α coefficients for the three factors of the YPI; α = .82 for the Grandiose/Manipulative factor; α = .81 for the Callous/Unemotional factor; and α = .68 for the Impulsive/Irresponsible factor. The α coefficient for the total YPI scale was also satisfactory (α = .87).

Parental Control

Adolescents' perceptions of parents' behavioral and psychological control were assessed with the Children's Report on Parent Behavior Inventory (CRPBI; Schludermann & Schludermann, 1988). This 30-item scale is the latest iteration of a

260-item scale first published in 1965 (Schaefer, 1965) and is derived from a 108-item version (Schludermann & Schludermann, 1970). The 30 items assess three major factors:

- ❖ Acceptance/rejection, which describe parental warmth, nurturance, and expression of love and affection (e.g., “My mother/father is a person who makes me feel better after talking over my worries with him/her”);
- ❖ Psychological control/autonomy, which captures psychological pressure relevant to guilt induction and love withdrawal (e.g., “My mother/father is less friendly with me, if I do not see things her/his way”); and,
- ❖ Firm control/lax control, which assesses adolescents’ perceptions of parents’ behavior control tactics, (e.g., “My mother/father believes in having a lot of rules and sticking to them”).

For the purposes of the present research study, only two subscales were utilized. The 20 items derived from the two subscales describe the mother and the father separately – with pronoun adjustments for gender, – wherein adolescents rate their parents on a 5-point Likert-type scale (see Appendices C, and D).

To measure adolescents’ perceptions of parents’ use of behavior control tactics, the 10 items from the firm control versus lax control subscale were used. Examples of items included in this subscale are: “My mother/father believes in having a lot of rules and sticking to them”, “My mother/father insists that I must do exactly as I am told”, and “My mother/father gives me as much freedom as I want” (recoded item). Questions were rated on a 5-point Likert-type scale, ranging from “*never*” (1) to “*always*” (5). High scores on the firm control/lax control subscale were indicative of behavioral over-control tactics, whereas low scores were indicative of behavioral under-control tactics.

To measure adolescents' perceptions of parents' use of psychological control tactics, the 10 items from the psychological control versus psychological autonomy subscale were used. Examples of items included in this subscale are: "My mother/father tells me of all the things she/he had done for me", "My mother/father wants to control whatever I do", and "My mother/father is less friendly with me, if I do not see things her/his way", Questions were rated on a 5-point Likert-type scale, ranging from "*never*" (1) to "*always*" (5). High scores on the psychological control/autonomy subscale were indicative of high psychological control tactics, whereas low scores were indicative of low psychological control tactics.

The psychometric properties of the CRPBI (Schludermann & Schludermann, 1988) have been supportive (Alderfer et al., 2008) and the subscales demonstrated satisfactory internal consistency values. In a study by Soucy and Larose (2000), the internal consistency values (Cronbach alpha coefficients) of the mother-adolescent and father-adolescent scores for the behavioral control subscale were .81, and .88, respectively; likewise, the internal consistency values (Cronbach alpha coefficients) of the mother-adolescent and father-adolescent scores for the psychological control subscale were .81, and .85, respectively, (Soucy & Larose, 2000).

3.1.2.2. Parental data collection

Demographic Data

Both parents of the adolescent student participants were required to give some data in relation to their gender, age, place of residence, as well as information about their marital status, level of education, and their occupation (see Appendix E).

Parent-Child Conflict

Parent-child conflict was assessed through the Child-Parent Relationship Scale (CPRS; Pianta, 1992). The CPRS (Pianta, 1992) is a self-report instrument completed by both mothers and fathers that assesses parents' perceptions of their relationships with their child. The measure is comprised of 30 items which are rated on 5-point Likert-type scale, ranging from *definitely does not apply* (1) to *definitely applies* (5). The ratings from the 30 items can be summed into groups of items corresponding to three subscales:

❖ The conflict subscale, which consists of twelve (12) items. The conflict subscale assesses the extent to which a parent feels that his or her relationship with their adolescent child is characterized by negativity (e.g., "My child and I always seem to be struggling with each other");

❖ The closeness subscale, which consists of fifteen (15) items. The closeness subscale measures the degree to which a parent perceives his or her relationship with their adolescent child as being characterized by warmth, affection, and open communication (e.g., "I share an affectionate, warm relationship with my child"); and

❖ The dependence subscale, which consists of three (3) items. The dependence subscale measures the degree to which a parent feels that his or her relationship with their adolescent child is characterized by feelings of dependency (e.g., "My child reacts strongly to separation from me").

To examine the stated hypotheses of the present research study in regards to parent-adolescent conflict, only the conflict subscale was employed (see Appendix F). Examples of items included in the conflict subscale are: "My child easily becomes angry at me", "My child sees me as a source of punishment and criticism", and "Dealing with my child drains my energy".

In studies, Cronbach alpha reliability for maternal conflict was .84, while Cronbach alpha for paternal conflict was .80 (Driscoll & Pianta, 2006).

Externalizing and Internalizing Behaviors

To measure externalizing and internalizing behaviors in adolescence, the school age version (children ages 4 – 18) of the Child Behavior Checklist – Parent Report (Short Form) (CBCL; Achenbach, 1991) was used. The measure is a standardized form consisting of a series of statements that might describe the adolescent participant during the previous six (6) months. It consists of 40 questions in which parents or caregivers report on their children's behavioral and emotional problems using a 3-point Likert-type response format (0 = not true, 1 = somewhat or sometimes true, 2 = very true or often true). The 40-item CBCL is made up of five syndrome scales which group into two higher order factors – externalizing and internalizing (see Appendix G).

Externalizing behaviors refer to a cluster of behavior problems that are manifested in children's or adolescent's outward behavior and reflect the child or adolescent negatively acting on the external environment (cited in Liu, 2004). The externalizing behaviors domain consists of:

❖ Delinquent behavior – the delinquent externalizing behaviors assessed by the 9-items in the CBCL include lying, cheating, swearing, truancy, stealing, setting fires, and vandalism. An example of items included in the delinquent behavior subscale include parents having to indicate the degree to which their adolescent child was "lying or cheating" either at present time or within the previous six (6) months;

❖ Aggressive behavior – the aggressive externalizing behaviors assessed by the 10-items in the CBCL include bragging, arguing, screaming, showing off, attention-seeking, teasing, being demanding, displaying threatening behavior and displaying a temper. An

example of items included in the aggressive behavior subscale include parents having to indicate the degree to which their adolescent child “gets in many fights” either at present time or within the previous six (6) months.

On the other hand, the construct of internalizing behavior problems refers to a grouping of behavior problems that are inner-directed and overcontrolled (Madigan, Atkinson, Laurin, & Benoit, 2012). The internalizing problems domain consists of:

❖ Withdrawal symptoms – withdrawn behaviors are addressed by 6 items in the CBCL; such questions concern social withdrawal, shyness, staring, sulking and sadness. An example of items included in the withdrawn symptoms subscale include parents having to indicate the degree to which their adolescent child is “secretive, keeps things to self” either at present time or within the previous six (6) months;

❖ Somatic complaints – somatic problems are addressed by 3 items (with one item being further subdivided into 8 sub-questions) in the CBCL and include tiredness, nausea, aching, vomiting, headaches, dizziness and complaints about skin, stomach or eye problems. An example of items included in the somatic complains subscale include parents having to indicate the degree to which their adolescent child “feels dizzy or lightheaded” either at present time or within the previous six (6) months; and

❖ Anxious/depressed syndromes – anxiety/depression symptoms are addressed by 12 items in the CBCL; such questions concern crying, fear, guilt, worries, loneliness, nervousness, worthlessness, and suspiciousness. An example of items included in the anxious/depressed symptoms subscale include parents having to indicate the degree to which their adolescent child was “too fearful or anxious” either at present time or within the previous six (6) months.

An important measure for children's and adolescent’s emotional, behavioral and social aspects of life, the CBCL has been used extensively in research (e.g., Buehler,

2006; Georgiou & Fanti, 2014; Rogers et al., 2003), with an extensive literature supporting its psychometric integrity (Achenbach, 1992). Validity and reliability for the scale scores have been documented (Achenbach & Rescorla, 2001; Buehler, 2006; Rogers et al., 2003). In Georgiou and Fanti's (2014) study, the Cronbach's alphas for externalizing behaviors ranged from .87 to .94, and for internalizing problems from .83 to .92. In one other study, Cronbach's alpha was .87 for mothers' reports of externalizing behaviors and .82 for internalizing behaviors; similarly, Cronbach's alpha was .89 for fathers' reports of externalizing behaviors and .85 for internalizing behaviors (Buehler, 2006).

3.1.3. Procedure

The present research study was conducted in Cyprus. Data collection for the first phase of the study occurred in the beginning of the first semester of the 2014 – 2015 school year, wherein 538 adolescent students as well as both their parents (513 mothers, and 464 fathers) participated. For the second phase of the study, thirty-six (36) adolescents re-participated.

Prior to the data collection process, all the necessary permissions from the Ministry of Education and Culture, and the Cyprus National Bioethics Committee were obtained. Upon obtaining the permissions, the nine schools to participate in the study were randomly chosen. Subsequently, the schools were personally contacted and meetings were arranged to discuss the procedure to be followed. During the meetings with the headmasters (or deputy headmasters) of each school, the purposes of the present study were explained in depth and details of the procedure to be followed were discussed. In addition, copies of the permission slips to be signed by parents, as well as

sample student questionnaires and sample parental questionnaires were given to the school for their records. In total, eight schools agreed to participate in the study.

Upon obtaining permissions from the school headmasters, the dates and times for the data collection process were arranged. Following the arrangements, the first visitation to the classes of the students to participate in the study was held (the school proposed hours to visit wherein the whole class of students would be present). Students were briefly informed of the purposes of the study as well as the procedure to be followed. Additionally, each student was given an envelope to take back home and give to their parents. Each envelope contained an information letter (regarding the purposes of the study, as well as, briefing the parents on all the necessary ethical information regarding voluntary participation, anonymity and confidentiality, and that their responses to the answers would not be used in any way other than for the stated reasons; see Appendix H), one consent form to be signed by the parents for their adolescent child to participate in the study (see Appendix I), as well as, two sets of questionnaires to be completed by the parents; one for the mother and one for the father (the consent form and each set of parent questionnaires were matched with a district code number, so as to be aware – at a later stage – of which parental questionnaires correspond to their child's set of questionnaires (which would be completed at a later date)). It was requested to the students to inform their parents of the research study and to ask them to complete all that is required – the consent form, and the two sets of questionnaires. Additional instructions to ease the succeeding data collection process were given to the students, such as to return the sealed envelopes containing the completed questionnaires of their parents back to the school within one week, as well as to bring the signed consent form during the student data collection day. Furthermore, via a text message, schools informed the parents of the selected classes of the research study

being conducted and, that an envelope containing a consent form and two sets of questionnaires were sent to them through their adolescent child to complete and return back to the school. This was done as an additional help by the schools to guarantee that parents would be informed about the research study being conducted.

One week following the first visitation to the students, the student data collection was carried out. For the reason that in high schools students attend many elective courses and therefore do not have many courses wherein the whole class of students is present, the data collection procedure was held during the same hours as in the first visitation so that the whole class of students was present. Those adolescents whose parents' did provide the required consent (for their child to participate in the study) were given a set of questionnaires to complete. Prior to the completion of the questionnaires, students were asked to read the front page of the questionnaires, which contained information regarding the purposes of the study, as well as, briefing the students on all the necessary ethical information regarding voluntary participation, anonymity and confidentiality, and that their responses to the answers would not be used in any way other than for the stated reasons (Appendix J). Students were also asked to copy the district code written on the parental consent form to their own questionnaire – to help match the parent set of questionnaires to that of their child's set of questionnaires, – and, were provided with some guidelines; for instance, that there are no right or wrong answers to the questions, and to make sure that all of the questions are answered. Once all of the students completed the questionnaires, they were informed of the second phase of the research study to take place in the second semester. Students who were interested in participating in the second phase of the research study had to provide their full name and the name of their school (see Appendix K) so that they could be contacted at a later date. Although this way anonymity is lost, students were ensured

that their names would not be used other than for reasons of the research study. Finally, students were thanked for their participation in the study, and were given a debriefing form, which contained information in regards to the purposes of the study in greater detail (see Appendix L).

Following the end of the data collection procedure, the data was coded in accordance to the quantitative responses of the participants to the measures and was entered into the IBM Statistical Package for the Social Sciences (IBM SPSS Statistics) version 18.0. The researcher then proceeded with some primary analyses of the data so as to identify the two distinct sub-groups necessary for the second phase of the study.

3.1.4. Plan of Analysis

The statistical procedures that were computed in this first phase of the study are presented in this section. Prior to any statistical analyses being conducted, frequencies analyses – to identify the valid percentage of the participants' responses to all the questions from the questionnaires – as well as data screening, were conducted. Data screening included the descriptive statistics (minimum and maximum values, means, standard deviations, etc) for all the variables, normality, multivariate outliers, linearity, homoscedasticity, and multicollinearity and singularity.

In regards to the statistical analyses being conducted, to determine the degree to which the measures used in the present study had internal consistency, first, reliability analyses of the scales (Cronbach's alpha) were conducted. Then, bivariate correlations between all composite scores were computed. This was done so as to identify any possible associations between: (a) parental adolescent-rearing practices, parent-adolescent relationship, and externalizing and internalizing behaviors; (b) adolescents' psychopathic traits, and parental adolescent-rearing practices and parent-adolescent

relationship; and (c) adolescents' psychopathic traits, and externalizing and internalizing behaviors. Following the results of the correlation analyses, regression analyses were computed in order to explore the stated hypotheses of the present study (see chapter 1, section 1.6.). Lastly, the moderation role of adolescents' psychopathic traits between parent variables (parental control, and parent-adolescent conflict) and externalizing and internalizing behavior problems was explored using PROCESS macro for SPSS (Hayes, 2013).

Additional statistical analyses employed include independent-samples t-tests in order to identify any group differences in the presence of adolescents' psychopathic traits, perceived parental control, parent-adolescent conflict, and exhibition of externalizing and internalizing behaviors. In doing so, the Bonferroni correction was applied to minimize the chances of obtaining false-positive results (type I errors) which usually happens when multiple pairwise tests are performed on a single set of data.

3.2. Phase II – Quasi–Experimental

3.2.1. Rationale for the use of a quasi–experimental method

The purpose of the second – quasi-experimental – phase is to examine in greater detail the role of impulsivity, for example, to investigate further the moderation effect of impulsivity on the effects of parent variables, on the development of externalizing and internalizing behaviors. The rationale for the use of the second phase is to bridge a relative gap in the literature wherein impulsivity is traditionally assessed only either through laboratory measures, or by parent- or self-ratings on scales of impulsivity. Using a multi-method assessment of such a complex trait, will overcome the limitations of self-awareness and possible demand characteristics issues that arise with the use of solely quantitative measures, and will provide more concrete conclusions about such a composite variable that is impulsivity. In doing so, this will add more reliability, validity, and credibility to the findings obtained from the first phase of the study.

3.2.2. Participants

For the completion of the second, quasi – experimental, phase of the study, it was required for a stratified sample of two groups of adolescent participants to be selected. Participants could be considered for inclusion in the quasi-experimental phase of the study had they met the following criteria: 1) they participated in the first phase of the study, and 2) they had provided their contact information to be contacted at a later date for the second phase of the study. Prior to the selection of the two groups of participants, independent-samples t-tests were computed to compare the scores on externalizing and internalizing behaviors between those participants who showed interest in participating in the second phase of the study, and those participants who did not. Ideally, no statistically significant differences between them should be found.

Results showed that, indeed, there were no statistically significant differences in their scores on externalizing and internalizing behaviors. A more detailed presentation of the results for the independent-samples t-tests is included in the results section that follows (see chapter 4, section 4.2.3.).

The one group that was selected for the second, quasi-experimental, phase of the study consisted of adolescent participants, who – at the first phase of the study – were identified not to exhibit either externalizing or internalizing behaviors, and the second group that was selected consisted of student participants who were found to exhibit either externalizing or internalizing behaviors. Participants were classified as belonging to either group if their score for externalizing or internalizing behaviors was 2 Standard Deviations (SD) above or below the mean (below the mean for the group wherein participants did not exhibit any problematic behaviors, and above the mean for the group wherein participants did exhibit problematic behaviors).

In total, thirty-six adolescents participated in the quasi-experimental phase of the study; each group consisted of 18 participants (mean age, 16.06 years, SD = .83 years). Both male and female adolescent students were represented in the sample; 33.3% (*N* = 12; mean age, 16.33 years, SD = .78 years) of the sample consisted of male adolescent students and 66.7% (*N* = 24; mean age, 15.92 years, SD = .83 years) of the sample consisted of female adolescent students.

As regards the low-high externalizing behaviors group, 18 adolescents participated in the second, quasi-experimental, phase of the study; 9 adolescents who were classified from analyses of the first phase of the study as exhibiting aggressive and delinquent behaviors, and 9 adolescents who were classified as not exhibiting such problematic behaviors. Table 3.3 presents the number of students from the low-high externalizing behaviors group, in regards to their gender.

Likewise, as regards the low-high internalizing behaviors group, 18 adolescents participated in the second, quasi-experimental, phase of the study; 9 adolescents who were classified from analyses of the first phase of the study as exhibiting internalizing symptoms, and 9 adolescents who were classified as not exhibiting such behaviors. Table 3.4 presents the number of students from the low-high internalizing behaviors group, in regards to their gender.

Table 3.3. – Number of adolescent students from the low/high externalizing behaviors group who participated in the second – quasi-experimental – phase of the study, according to their gender (percentages in brackets)

		LOW / HIGH EXTERNALIZING BEHAVIORS		
		Low Ext. Behaviors	High Ext. Behaviors	**Total**
GENDER	Male	2 (22,2%)	5 (55,6%)	7 (38,9%)
	Female	7 (77,8%)	4 (44,4%)	11 (61,1%)
	TOTAL	9 (100%)	9 (100%)	18 (100%)

Table 3.4. – Number of adolescent students from the low/high internalizing behaviors group who participated in the second – quasi-experimental – phase of the study, according to their gender (percentages in brackets)

		LOW / HIGH INTERNALIZING BEHAVIORS		
		Low Int. Behaviors	High Int. Behaviors	**Total**
GENDER	Male	5 (55,6%)	1 (11,1%)	6 (33,3%)
	Female	4 (44,4%)	8 (88,9%)	12 (66,7%)
	TOTAL	9 (100%)	9 (100%)	18 (100%)

3.2.3. Measures

Adolescents who participated in the quasi-experimental phase of the present study were asked to complete a battery of behavioral measures of impulsivity, as well as, two self-report questionnaires.

3.2.3.1. Adolescent Self-Reports

Executive Dysfunction

To assess the everyday problems in executive functioning that people might encounter, such as problems with planning, sustaining attention, or impulsivity, the Self-Rated Dysexecutive Questionnaire (DEX; Wilson, Alderman, Burgess, Emslie, & Evans, 1996) was used (see Appendix M). DEX is comprised of 37 items which are rated on 5-point Likert-type scale, ranging from *never* (0) to *very often* (5), with a higher score indicating higher frequency of dysexecutive behavior in everyday life. The items purport to assess four areas of functioning associated with executive difficulties: emotional and personality changes (e.g., “I have difficulty showing emotion”), motivational changes (e.g., “I seem lethargic and unenthusiastic about things”), behavioral changes (e.g., “I act without thinking, doing the first thing that comes to mind”), and cognitive changes (e.g., “I have difficulty thinking ahead or planning for the future”). Previous studies have reported high internal consistency (>.8) when using the DEX questionnaire (Gerstorf, Siedlecki, Tucker-Drob, & Salthouse, 2008; Magar, Phillips, & Hosie, 2008).

Externalizing and Internalizing Behaviors

To further measure externalizing and internalizing behaviors in adolescence (ages 11 – 18), the Youth Self-Report (Short Form) (YSR; Achenbach & Rescorla, 2001) was used. The measure consists of a series of statements that might describe the adolescent

participant during the previous six (6) months. More specifically, it consists of 40 questions in which the adolescent reports on his/her behavioral and emotional problems using a 3-point Likert-type response format (0 = not true, 1 = somewhat or sometimes true, 2 = very true or often true). The 40-item YSR is made up of five syndrome scales which group into two higher order factors – externalizing and internalizing (see Appendix N) (for a description of the five syndrome scales, please see chapter 3, section 3.1.2.2.).

The YSR has been used extensively in research (e.g., Achenbach & Rescorla, 2001), and reliability for the scale scores have been documented (Achenbach & Rescorla, 2001; Ebesutani, Bernstein, Martinez, Chorpita, & Weisz, 2011). In Ebesutani's et al. (2011) study, the Cronbach's alphas for externalizing problems syndrome scales ranged from .78 to .85 (α = .89 for the whole externalizing behaviors scale), and for internalizing problems syndrome scales from .67 to .83 (α = .89 for the whole internalizing behaviors scale).

3.2.3.2. Behavioral Measures of Impulsivity

GoStop Impulsivity Paradigm

The GoStop Impulsivity Paradigm (GoStop; Dougherty et al., 2003, 2005a): is a stop-task requiring responses to target stimuli (i.e., identically-matching 5-digit numbers presented in black) and inhibiting responses when the target is unpredictably coupled with a stop signal (identically-matching 5-digit number that changes in colour from black to red) at one of four stop delays (50,150, 250, and 350 ms). Participants are instructed to respond while a number is still on the monitor, but to withhold responding if that number turns red (the stop signal). The proportion of responses to stop trials is interpreted as impulsive responding (Dougherty et al., 2005a) and this type of

responding is consistent with what has been described as response inhibition aspects of impulsivity (Dougherty et al., 2005b). The GoStop Impulsivity Paradigm (Dougherty et al., 2003, 2005a) has been found to differentiate between different groups (e.g., pathological gamblers versus controls; Billieux et al., 2012; Ledgerwood, Alessi, Phoenix, & Petry, 2009).

Two Choice Impulsivity Paradigm

Two Choice Impulsivity Paradigm (TCIP; Dougherty et al., 2003, 2005a): The TCIP is a discrete-choice procedure, for assessing tolerance for delayed rewards. In the procedure, participants experience a series of trials in which they must press a button to select one of two shapes that appear on a monitor. Each shape choice is associated with a different delay–reward contingency that is determined by the experimenter. One shape choice is associated with a smaller reward after a shorter delay than the other shape choice is. When one of the two shapes is chosen, a pre-programmed delay is initiated. When the delay has passed, a reward (points) is awarded. Reward-directed aspects of impulsivity are defined as a preference for smaller–sooner over larger–later rewards. In other words, a preference for smaller-sooner choices rather than larger-later choices is interpreted as an indicator of greater impulsivity (Dougherty et al., 2005a). Similar to the GoStop Impulsivity Paradigm (Dougherty et al., 2003, 2005a), the TCIP (Dougherty et al., 2003, 2005a) has been found to differentiate between different groups (e.g., people with multiple suicide attempts versus controls; Mathias et al., 2011).

3.2.4. Procedure

Following the data analysis procedure from the first phase of the study, the thirty-six adolescent participants to take part in the second phase of the study were identified (for further information on the identification procedure, see chapter 3, section 3.2.2).

Subsequently, the schools wherein the selected adolescent students attended were contacted to discuss the procedure to be followed. Following the arrangements, the data collection was carried out on the agreed dates. For the reason that the procedure for this part of the research study demanded participants to complete two questionnaires, as well as, two behavioral measures of impulsivity on a laptop computer, each adolescent participated individually. Similar to the first phase of the study, prior to the commencement of the procedure, students were asked to copy their district code to their questionnaire and, were then provided with some guidelines, such as that there are no right or wrong answers to the questions, and to make sure that all of the questions are answered. Following the completion of the quantitative part of the procedure, participants were, then, individually tested with the above-mentioned behavioral measures of impulsivity (see chapter 3, section 3.2.3.2.). First, they were given instructions on the procedure to be followed and were given the opportunity to ask questions for clarification. Once the procedure to be followed was clearly understood, participants were left to complete the two tasks. Finally, participants were thanked for their participation in the study, and were given the opportunity to ask for further information in regards to the procedure or the purposes of the study.

Following the end of the data collection procedure, the data was entered into the IBM Statistical Package for the Social Sciences (IBM SPSS Statistics) version 18.0., and then, the researcher proceeded with the analyses of the data.

3.2.5. Plan of Analysis

The statistical procedures that were computed in this second – quasi-experimental – phase of the study are presented in this section. Prior to any statistical analyses being conducted, reliability analyses of the scales (Cronbach's alpha) were, first, conducted to determine the degree to which the measures used in the present study had internal consistency.

In regards to the statistical analyses being conducted, independent-samples t-tests were computed to compare the scores on externalizing and internalizing behaviors between adolescent participants who showed interest in participating in the second phase of the study, and adolescent participants who did not. In addition, non-parametric tests of difference were conducted; this was done to compare differences between two independent groups, but, due to the small number of adolescents participating in the second phase of the study, the dependent variables were not normally distributed. More specifically, a number of Mann-Whitney U Tests were computed. This was done so as to identify any possible differences in: (a) dysexecutive symptoms between the low/high externalizing behaviors group; (b) dysexecutive symptoms between the low/high internalizing behaviors group; (c) impulsivity between the low/high externalizing behaviors group; and (d) impulsivity between the low/high internalizing behaviors group. Furthermore, Wilcoxon Signed Rank Tests were computed to compare the performance of participants in one behavioral measure of impulsivity – the GoStop Impulsivity Paradigm – which consists of two blocks of stop trials. In doing the numerous tests of difference, the Bonferroni correction was applied, to minimize the chances of obtaining false-positive results (type I errors) which usually happens when multiple pairwise tests are performed on a single set of data.

Apart from the non-parametric tests of difference, bivariate correlations (Spearman's rho) were computed. This was done so as to identify any possible associations between: (a) the self-reported measures of impulsivity (= impulsivity construct, and impulsivity's distinct subscales) and the behavioral measures of impulsivity (= the GoStop Impulsivity Paradigm, and the Two Choice Impulsivity Paradigm); and (b) parent-reports and self-report measures of externalizing and internalizing behaviors. Lastly, the moderation role of adolescents' impulsivity between parent variables (parental control, and parent-adolescent conflict) and externalizing and internalizing behavior problems was explored using PROCESS macro for SPSS (Hayes, 2013).

4. CHAPTER 4 – Results

4.1. Phase I – Full-Sample Study

4.1.1. Reliability Analyses

When conducting quantitative research, testing the reliability of the instruments one is using is essential. Reliability means that a measure (in this case questionnaire) should consistently reflect the construct that it is measuring (Field, 2013). In other words, the items that make up the questionnaire should "hang together" (measure the same underlying construct) (Pallant, 2007). Cronbach's alpha, α, is the most common measure of scale reliability (Field, 2013). According to Kline (1999), although the generally accepted α value of .8 is the most appropriate, when dealing with psychological constructs .7 is also considered acceptable (Field, 2013).

To determine the degree to which the questionnaires used in the present research study are reliable, internal consistency reliability analyses (Cronbach's alpha) of the items measured on the Youth Psychopathic Traits Inventory (YPI; Andershed et al., 2002), Children's Report on Parent Behavior Inventory (CRPBI; firm control versus lax control, and psychological control versus psychological autonomy subscales; Schludermann & Schludermann, 1988), Child-Parent Relationship Scale (CPRS; conflict subscale; Pianta, 1992), and Child Behavior Checklist (CBCL; Achenbach, 1991) were conducted. Reliability indices for all scales are summarized as follows and presented in Table 4.1.

The Youth Psychopathic Traits Inventory (YPI)

The scale consists of fifty (50) items which have been shown to conform very well with the hypothesized three-factor construct of psychopathic personality disorder. For the present study, the whole YPI scale has been shown to have high internal consistency (α

= .91). When considering the three factors of the YPI distinctively, satisfactory internal consistency values (Cronbach alpha coefficients) were also found; α = .91 for the Grandiose/Manipulative factor; α = .77 for the Callous/Unemotional factor; and α = .81 for the Impulsive/Irresponsible factor.

Children's Report on Parent Behavior Inventory (CRPBI)

The scale employed in the present study consisted of two subscales; the firm control/lax control subscale (10 items), and the psychological control/ psychological autonomy subscale (10 items). The two subscales demonstrated satisfactory internal consistency values. More specifically, the internal consistency values (Cronbach alpha coefficients) of the mother-adolescent and father-adolescent scores for the behavioral control subscale were .79, and .81, respectively; likewise, the internal consistency values (Cronbach alpha coefficients) of the mother-adolescent and father-adolescent scores for the psychological control subscale were .85, and .86, respectively. The α coefficient for the total CRPBI scale was also satisfactory both for mother-adolescent (α = .85) and father-adolescent (α = .88) reports.

Child-Parent Relationship Scale (CPRS)

The scale employed in the present study consisted of solely the conflict subscale (12 items). Similar to previous studies (e.g., Driscoll & Pianta, 2006), the present study also reported high internal consistency values; Cronbach alpha reliability for mother-adolescent conflict was .90, while Cronbach alpha reliability for father-adolescent conflict was .87.

Child Behavior Checklist (CBCL)

The 40-item scale used in the present study (wherein parents or caregivers report on their children's behavioral and emotional problems) group into two higher order factors – externalizing (delinquency and aggression) and internalizing (withdrawal symptoms, somatic complaints, and anxious/depressed syndromes) behaviors.

In the present study, Cronbach's alpha was .81 for mothers' reports of externalizing behaviors and .84 for internalizing behaviors; similarly, Cronbach's alpha was .81 for fathers' reports of externalizing behaviors and .82 for internalizing behaviors. The α coefficient for the total CBCL scale was also satisfactory both for mothers' reports (α = .88) and fathers' reports (α = .87).

Table 4.1. Cronbach's alpha of the Youth Psychopathic Traits Inventory (YPI), Children's Report on Parent Behavior Inventory (CRPBI), Child-Parent Relationship Scale (CPRS), and Child Behavior Checklist (CBCL).

Construct	*Cronbach's alpha*
Psychopathic Traits	
Gradiose/Manipulative Dimension	*.91*
Callous/Unemotional Dimension	*.77*
Impulsive/Irresponsible Dimension	*.81*
Maternal Parental Control	
Maternal Behavioral Control	*.79*
Maternal Psychological Control	*.85*
Paternal Parental Control	
Paternal Behavioral Control	*.81*
Paternal Psychological Control	*.86*
Mother-Adolescent Conflict	*.90*
Father-Adolescent Conflict	*.87*
Mother-Reported Adolescent Problems	
Externalizing Behaviors	*.81*
Internalizing Behaviors	*.84*
Father-Reported Adolescent Problems	
Externalizing Behaviors	*.81*
Internalizing Behaviors	*.82*

4.1.2. Descriptive Analysis

As all the measures used in the present research study (the Youth Psychopathic Traits Inventory, Children's Report on Parent Behavior Inventory, Child-Parent Relationship Scale, and the Child Behavior Checklist) showed satisfactory Cronbach's alphas (see Table 4.1.), composite variables for each construct were computed.

In regards to adolescents' psychopathic traits, three factors were computed: Callous-Unemotionality (= Callousness subscale, Unemotionality subscale, and Remorselessness subscale); Narcissism (= Dishonest Charm subscale, Grandiosity subscale, Lying subscale, and Manipulation subscale; and Impulsivity (= Impulsiveness, Thrill-Seeking subscale, and Irresponsibility subscale).

In regards to parental control, four factors were computed: Mother Behavioral Control, Mother Psychological Control, Father Behavioral Control, and Father Psychological Control. For parent-adolescent conflict, two factors were computed: Mother-Adolescent Conflict, and Father-Adolescent Conflict.

Finally, regarding adolescents' externalizing and internalizing behaviors, four factors were computed: Mother-Reported Externalizing Behaviors (= delinquent behaviors subscale, and aggressive behaviors subscale), Mother-Reported Internalizing Behaviors (= withdrawal symptoms subscale, somatic symptoms subscale, and anxious/depressed symptoms subscale), Father-Reported Externalizing Behaviors (same as Mother-Reported Externalizing Behaviors), and Father-Reported Internalizing Behaviors (same as Mother-Reported Internalizing Behaviors). Table 4.2. presents the means and standard deviations for each construct, and table 4.3. presents the means and standard deviations for each construct for boys and girls, respectively.

Table 4.2. Means and standard deviations of the composite scores of the scales of the Youth Psychopathic Traits Inventory (YPI), Children's Report on Parent Behavior Inventory (CRPBI), Child-Parent Relationship Scale (CPRS), and the Child Behavior Checklist (CBCL).

	Mean	SD
Callous Unemotionality	32.65	8.72
Narcissism	40.20	13.47
Impulsivity	38.42	8.87
Mother Behavioral Control	26.51	6.48
Mother Psychological Control	21.28	7.40
Mother-Adolescent Conflict	22.21	8.26
Mother-Reported Externalizing Behaviors	3.94	3.99
Mother-Reported Internalizing Behaviors	6.56	5.56
Father Behavioral Control	27.52	7.27
Father Psychological Control	19.51	7.36
Father-Adolescent Conflict	20.44	7.35
Father-Reported Externalizing Behaviors	3.64	3.79
Father-Reported Internalizing Behaviors	6.10	5.13

Table 4.3. Means and standard deviations of the composite scores of the scales of the Youth Psychopathic Traits Inventory (YPI), Children's Report on Parent Behavior Inventory (CRPBI), Child-Parent Relationship Scale (CPRS), and the Child Behavior Checklist (CBCL) – Adolescent Boys' and Girls' Scores.

	Boys		Girls	
	Mean	SD	Mean	SD
Callous Unemotionality	35.96	7.80	30.35	8.59
Narcissism	45.35	13.88	36.65	11.98
Impulsivity	40.87	9.18	36.71	8.23
Mother Behavioral Control	26.28	6.09	26.67	6.74
Mother Psychological Control	22.05	6.73	20.74	7.81
Mother-Adolescent Conflict	21.05	7.63	23.00	8.59
Mother-Reported Externalizing Behaviors	4.07	4.32	3.86	3.76
Mother-Reported Internalizing Behaviors	5.14	4.72	7.51	5.88
Father Behavioral Control	27.63	7.19	27.44	7.34
Father Psychological Control	20.50	7.46	18.82	7.22
Father-Adolescent Conflict	19.67	6.91	21.00	7.62
Father-Reported Externalizing Behaviors	3.94	4.28	3.43	3.38
Father-Reported Internalizing Behaviors	5.19	4.50	6.76	5.45

4.1.3. Preliminary Analyses

Comparisons between adolescents' externalizing and internalizing behaviors based on type of school

A series of multivariate analysis of variance (MANOVA) were performed to investigate differences in experiences of externalizing and internalizing behaviors based on type of school.

A MANOVA was used to compare experiences of externalizing behaviors (mother-reported, father-reported, and the integrated externalizing behaviors) for two categories of schools, namely: (Category 1) public urban schools and private school; and (Category 2) public rural school and technical school. Results indicated that there was no statistically significant difference between types of school on the experiences of externalizing behaviors, F (2, 433) = .08, p = .928; Wilks' Lambda = 1.000; partial eta squared = .000.

Similarly, a MANOVA was also used to compare experiences of internalizing behaviors (mother-reported, father-reported, and the integrated internalizing behaviors) for two categories of schools, namely: (Category 1) public urban schools and private school; and (Category 2) public rural school and technical school. Similar to externalizing behaviors, there was no statistically significant difference between types of school on the experiences of internalizing behaviors, F (2, 433) = .29, p = .750; Wilks' Lambda = .999; partial eta squared = .001. The logic for the above categorization of the schools is that generally urban schools (public and private) serve higher SES communities, whereas rural schools and technical schools serve blue collar, working families.

Overall, no significant differences based on the type of school have been noted. In other words, adolescents from either type of school experience similar levels of externalizing and internalizing behaviors.

Comparisons between adolescent boys' and girls' externalizing and internalizing behaviors

Independent-samples t-tests were conducted, using Bonferroni adjusted alpha levels of .013 per test (.05/4), to compare mother- and father-reports of boys' and girls' externalizing and internalizing behaviors.

In regards to mother reports, there was no significant difference in scores for boys (M = 4.07, SD = 4.32) and girls (M = 3.86, SD = 3.76) for externalizing behaviors, $t(509) = .58$, $p = .56$, and this represented a small–sized effect, $r = .02$. On the other hand, for internalizing behaviors, given a violation of Levene's test for homogeneity of variances, $p < .0001$, a t-test not assuming homogeneous variances was calculated. Girls reported more internalizing symptoms (M = 7.51, SD = 5.88) than boys (M = 5.14, SD = 4.72). This difference was significant ($t(494,38) = -5.06$, $p < .0001$), and represented a large–sized effect, $r = .22$.

As regards father reports, due to violations of Levene's test for homogeneity of variances, $p < .05$, t-tests not assuming homogeneous variances were calculated. Similar findings to those of mother-reports were found; there was no significant difference in scores for boys (M = 3.94, SD = 4.28) and girls (M = 3.43, SD = 3.38) for externalizing behaviors, $t(351,16) = 1.40$, $p = .16$, and this represented a small–sized effect, $r = .07$. For internalizing behaviors, there was a difference in scores for boys and girls; more specifically, girls reported more internalizing symptoms (M = 6.76, SD =

5.45) than boys (*M* = 5.19, *SD* = 4.50). This difference was significant (*t*(449,39) = -3.38, *p* = .001), and represented a large–sized effect, *r* = .16.

Comparisons between adolescent boys' and girls' psychopathic traits

Independent-samples t-tests were conducted, using Bonferroni adjusted alpha levels of .017 per test (.05/3), to compare boys' and girls' psychopathic traits.

In regards to callous-unemotionality, there was a significant difference in scores for boys (*M* = 35.96, *SD* = 7.80) and girls, *M* = 30.35, *SD* = 8.59; *t*(536) = 7.75, *p* < .0001, and this represented a large–sized effect, *r* = .32.

As regards narcissism, due to a violation of Levene's test for homogeneity of variances, *p* < *.0001,* a *t*-test not assuming homogeneous variances was calculated. Again, there was a significant difference in scores for boys (*M* = 45.35, *SD* = 13.88) and girls (*M* = 36.65, *SD* = 11.98). This difference was significant (*t*(420,61) = 7.53, *p* < .0001), and represented a large–sized effect, *r* = .32.

Lastly, regarding impulsivity, there was also a significant difference in scores for boys (*M* = 40.87, *SD* = 9.18) and girls, *M* = 36.71, *SD* = 8.23; *t*(535) = 5.50, *p* < .0001, and this represented a large–sized effect, *r* = .23.

Comparisons between the low/high externalizing behavior groups' psychopathic traits

In order to examine differences in psychopathic traits between adolescents in the low externalizing behaviors group and adolescents in the high externalizing behaviors group, independent-samples t-tests were conducted, using Bonferroni adjusted alpha levels of .017 per test (.05/3), with all the three constructs of psychopathy being included in the analysis.

For C-U traits, significant differences were found in scores for the low externalizing behaviors group (M = 29.48, SD = 6.99) and the high externalizing behaviors group (M = 38.14, SD = 8.99), $t(76) = -4.53$, $p < .0001$, and this represented a large-sized effect, r = .46.

Likewise, for narcissism, significant differences were found; given a violation of Levene's test for homogeneity of variances, $p = .02$, a t-test not assuming homogeneous variances was calculated. The results indicated a significant difference in scores for the low externalizing behaviors group (M = 34.70, SD = 10.42) and the high externalizing behaviors group (M = 49.41, SD = 15.25), $t(29.04) = -4.16$, $p < .0001$, and this represented a large-sized effect, r = .61.

Finally, in regards to impulsivity, again, given a violation of Levene's test for homogeneity of variances, $p = .01$, a t-test not assuming homogeneous variances was calculated. The results indicated that there was a significant difference in levels of impulsivity between the two groups $t(28.83) = -5.07$, $p < .0001$. These results suggest that adolescents low in externalizing behaviors are less impulsive (M = 33.80, SD = 6.72) than adolescents high in externalizing behaviors (M = 45.50, SD = 9.96), and this difference represented a large–sized effect, r = .69.

Furthermore, as impulsivity will be further examined in the second phase of the study, an independent-samples t-test examining differences between the two groups in regards to thrill-seeking, irresponsibility, and impulsiveness (the three subscales of the construct of impulsivity) was computed. The results of this test indicated that there was a difference between the two groups in all test measures. More specifically, in regards to thrill-seeking, significant differences were found in scores for the low externalizing behaviors group (M = 14.14, SD = 3.34) and the high externalizing behaviors group (M = 18.05, SD = 3.53), $t(76) = -4.57$, $p < .0001$, and this represented a large-sized effect, r

= .46. In regards to irresponsibility and impulsivity, due to violations of Levene's test for homogeneity of variances, $p < .05$, *t*-tests not assuming homogeneous variances were calculated. The results indicated that, for irresponsibility, there were significant differences in scores for the low externalizing behaviors group (M = 7.29, SD = 2.37) and the high externalizing behaviors group (M = 12.23, SD = 4.58), $t(25.56) = -4.82$, $p < .0001$, and this represented a large-sized effect, $r = .69$. Likewise, for impulsiveness, there were, again, significant differences were found in scores for the low externalizing behaviors group (M = 12.38, SD = 2.50) and the high externalizing behaviors group (M = 15.23, SD = 3.58), $t(29.37) = -3.42$, $p < .0001$, and this represented a large-sized effect, $r = .53$.

Comparisons between the low/high internalizing behavior groups' psychopathic traits

In order to examine differences in psychopathic traits between adolescents in the low internalizing behaviors group and adolescents in the high internalizing behaviors group, independent-samples t-tests were conducted, using Bonferroni adjusted alpha levels of .017 per test (.05/3), with all the three constructs of psychopathy being included in the analysis.

For C-U traits, given a violation of Levene's test for homogeneity of variances, $p = .05$, a *t*-test not assuming homogeneous variances was calculated. No difference was found in scores for the low internalizing behaviors group (M = 32.55, SD = 6.78) and the high internalizing behaviors group (M = 37.61, SD = 11.93), $t(32.44) = -1.83$, $p > .05$, and this represented a large-sized effect, $r = .31$.

Similar results were also obtained for narcissism (Low: M = 39.19, SD = 12.47; High: M = 44.87, SD = 16.27; $t(52) = -1.45$, $p > .05$, $r = .20$), and impulsivity (Low: M = 37.32, SD = 7.88; High: M = 42.17, SD = 11.46; $t(36.80) = -1.75$, $p > .05$, $r = .28$).

Furthermore, as impulsivity will be further examined in the second phase of the study, an independent-samples t-test examining differences between the two groups in regards to thrill-seeking, irresponsibility, and impulsiveness (the three subscales of the construct of impulsivity) was computed. The results of this test indicated that there are no significant differences between the two groups in either test measure. More specifically, no significant differences were found either for thrill-seeking (Low: M = 15.13, SD = 3.32; High: M = 17.09, SD = 4.93; $t(36.34) = -1.65$, $p > .05$, $r = .26$), irresponsibility (Low: M = 8.71, SD = 3.21; High: M = 10.30, SD = 4.83; $t(35.93) = -1.38$, $p > .05$, $r = .22$), or impulsiveness (Low: M = 13.48, SD = 3.35; High: M = 14.78, SD = 4.25; $t(52) = -1.26$, $p > .05$, $r = .17$).

Comparisons between maternal and paternal parental control

Paired-samples t-tests, using Bonferroni adjusted alpha levels of .025 per test (.05/2), were conducted to compare mother parental control (behavioral control and psychological control) and father parental control (behavioral control and psychological control).

On average, adolescent participants reported fathers to exhibit higher behavioral control (M = 27.52, SD = 7.27) than mothers (M = 26.53, SD = 6.51). This difference was significant ($t(518) = -3.53$, $p < .0001$), and represented a large–sized effect, $r = .15$. On the contrary, mothers were reported to exhibit higher psychological control (M = 21.26, SD = 7.40) than fathers (M = 19.53, SD = 7.37). This difference was significant ($t(517) = 5.26$, $p < .0001$), and represented a large–sized effect, $r = .22$.

Similar data were obtained when examining boys' and girls' reports (using Bonferroni adjusted alpha levels of .013 per test (.05/4), separately. For boys' reports, fathers were reported to exhibit higher behavioral control (M = 27.67, SD = 7.20) than

mothers (*M* = 26.38, *SD* = 6.09). This difference was significant (*t*(214) = -3.03, *p* = .003), and represented a large–sized effect, *r* = .20. On the contrary, mothers were reported to exhibit higher psychological control (*M* = 22.07, *SD* = 6.78) than fathers (*M* = 20.47, *SD* = 7.46). Nevertheless, this difference was non-significant (*t*(214) = 3.18, *p* = .002), and represented a large–sized effect, *r* = .21. For girls' reports, fathers were reported to exhibit higher behavioral control (*M* = 27.45, *SD* = 7.33) than mothers (*M* = 26.64, *SD* = 6.81), but this difference was non-significant (*t*(302) = -2.16, *p* = .03). In contrast, mothers were reported to exhibit higher psychological control (*M* = 20.68, *SD* = 7.78) than fathers (*M* = 18.86, *SD* = 7.25). This difference was significant (*t*(302) = 4.19, *p* < .0001), and represented a large–sized effect, *r* = .23.

Additionally, independent-samples t-tests using Bonferroni adjusted alpha levels of .013 per test (.05/4) were conducted, to examine differences in reports on parental control, for boys and girls. In regards to mother behavior control, father behavior control, and father psychological control, no significant differences were found in scores for boys and girls, *t*(531) = -.68, *p* > .05; *t*(522) = .29, *p* > .05; and *t*(521) = 2.58, *p* > .05, respectively. As regards mother psychological control, given a violation of Levene's test for homogeneity of variances, *p = .05,* a *t*-test not assuming homogeneous variances was calculated. Significant differences were found in scores for boys (*M* = 22.05, *SD* = 6.73) and girls, *M* = 20.74, *SD* = 7.81; *t*(531) = 2.06, *p* < .05; however, it represented a moderate–sized effect, *r* = .09.

Comparisons between mother-adolescent and father-adolescent conflict

A paired-samples t-test was conducted to compare mother-adolescent conflict and father-adolescent conflict. On average, mothers reported higher conflict (*M* = 22.11, *SD*

= 8.31) than fathers (*M* = 20.36, *SD* = 7.34), and this difference was significant (*t*(435) = 5.03, *p* < .0001), and represented a large–sized effect, *r* = .23.

Similar data was obtained for mother-adolescent conflict and father-adolescent conflict for boys and girls (using Bonferroni adjusted alpha levels of .025 per test (.05/2)), separately. For boys, significant differences were found in scores for mother-adolescent conflict (*M* = 20.91, *SD* = 7.61) and father-adolescent conflict, *M* = 19.43, *SD* = 6.77; *t*(178) = 3.06, *p* = .003, and this represented a large–sized effect, *r* = .22. For girls, again, significant differences were found in scores for mother-adolescent conflict (*M* = 22.95, *SD* = 8.67) and father-adolescent conflict, *M* = 21.01, *SD* = 7.66; *t*(256) = 4.00, *p* < .0001, and this represented a large–sized effect, *r* = .24.

Additionally, independent-samples t-tests, using Bonferroni adjusted alpha levels of .025 per test (.05/2), were conducted to examine for differences in mother-adolescent conflict and father-adolescent conflict, for boys and girls. As regards mother-adolescent conflict, girls reported higher mother-adolescent conflict (*M* = 23.00, *SD* = 8.59) than boys (*M* = 21.05, *SD* = 7.63). This difference was significant (*t*(510) = -2.64, *p* = .009), and represented a moderate–sized effect, *r* = .12. As regards father-adolescent conflict, no significant differences were found in scores for boys (*M* = 19.67, *SD* = 6.91) and girls, *M* = 21.00, *SD* = 7.62; *t*(460) = -1.93, *p* = .055; however, it represented a moderate–sized effect, *r* = .09.

4.1.4. Data Associations

Correlations between Mother-Reported and Father-Reported Externalizing and Internalizing Behaviors

The relationships between mother-reported externalizing behaviors and father-reported externalizing behaviors (as measured by the respective sub-factors of the CBCL), and

mother-reported internalizing behaviors and father-reported internalizing behaviors (as measured by the respective sub-factors of the CBCL) were examined using Correlation analysis. Results showed that there was a strong, positive correlation between mother-reported externalizing behaviors and father-reported externalizing behaviors, $r = .75$, $p < .0005$, and, a strong, positive correlation between mother-reported internalizing behaviors and father-reported internalizing behaviors, $r = .68$, $p < .0005$ (see Table 4.5.). Given that the factors are highly correlated with one another, two new factors were computed; Externalizing Behaviors (wherein both the mother- and father-reports are integrated), and Internalizing Behaviors (wherein both the mother- and father-reports are integrated). These two new factors will also be included in the analysis.

Overall findings: Data analyses differentiating between different groups (e.g., male versus female adolescents, high versus low externalizing behaviors, high versus low internalizing behaviors, and fathers versus mothers) generated important findings; in the examination of sex differences in the presence of psychopathic traits, boys scored higher than girls in all three dimensions of psychopathy – C-U traits, narcissism, and impulsivity. Regarding externalizing and internalizing behaviors, sex differences were only noted for internalizing behaviors, wherein girls displayed more internalizing symptoms than boys. Differences between adolescents who displayed either high or low externalizing behaviors were also established. More specifically, adolescents in the high externalizing behaviors group scored considerably higher in the callous-unemotional, narcissistic, and impulsive dimensions than adolescents in the low externalizing behaviors group. Finally, differences were also found for fathers and mothers; fathers were found to demonstrate more behavioral control tactics (e.g., rules setting, monitoring) than mothers, whereas mothers used more psychological control tactics (e.g. love withdrawal and guilt induction) than fathers. Additionally, mother-adolescent

conflict was higher than father-adolescent conflict, and this was true both for boys and girls; in other words, both boys and girls shared a more negative relationship with their mothers than their fathers.

4.1.5. Hypothesis One

Hypothesis one of the present research study states that parent control will be significantly related to adolescents' exhibition of externalizing and internalizing behaviors. More specifically, it is hypothesized that (*a*) behavioral control will significantly negatively predict both externalizing and internalizing behaviors, and, (*b*) psychological control will significantly positively predict externalizing and internalizing behaviors.

Associations between parent control and externalizing and internalizing behaviors

Prior to examining the predictive significance of parent control (behavioral control, and psychological control) on adolescents' externalizing and internalizing behaviors, bivariate correlations between all the relevant scales were computed so as to identify possible associations among mothers' and fathers' control tactics and adolescents' exhibition of externalizing and internalizing behaviors.

In regards to the mother, results showed that mother behavior control was significantly related only with mother-reported externalizing behaviors, $r = .09$, $p < .05$, and the integrated externalizing behaviors, $r = .11$, $p < .05$. Moreover, mother psychological control was significantly related to mother-reported externalizing behaviors ($r = .34$, $p < .0005$), mother-reported internalizing behaviors ($r = .15$, $p < .05$), and the integrated externalizing behaviors ($r = .33$, $p < .0005$) and integrated internalizing behaviors ($r = .16$, $p < .05$).

As regards the father, father behavior control was significantly related solely with father-reported externalizing behaviors ($r = .15$, $p < .05$), and integrated externalizing behaviors ($r = .16$, $p < .05$). Father psychological control was significantly related with father-reported externalizing symptoms ($r = .34$, $p < .0005$), father-reported internalizing

symptoms (r = .22, p < .05), and the integrated externalizing behaviors (r = .35, p < .0005) and integrated internalizing behaviors (r = .21, p < .05). Tables 4.4. and 4.5. detail these correlations for mothers and fathers, respectively.

Table 4.4. – Correlation Coefficients between mother parental control and externalizing and internalizing behaviors

	Mother Psychological Control	M-R Externalizing Behaviors	M-R Internalizing Behaviors	MF-R Externalizing Behaviors	MF-R Internalizing Behaviors
Mother Behavioral Control	**.37****	**.09***	.00	**.11***	.03
Mother Psychological Control		**.34****	**.15****	**.33****	**.16****
M-R Externalizing Behaviors			**.46****	**.94****	**.44****
M-R Internalizing Behaviors				**.44****	**.92****
MF-R Externalizing Behaviors					**.48****

Note: * *p* < *.05, ** p* < *.01*; M-R = Mother-Reported, MF-R = Mother & Father – Reported

Table 4.5. – Correlation Coefficients between father parental control and externalizing and internalizing behaviors

	Father Psychological Control	F-R Externalizing Behaviors	F-R Internalizing Behaviors	MF-R Externalizing Behaviors	MF-R Internalizing Behaviors
Father Behavioral Control	**.52****	**.13****	.08	**.13****	.07
Father Psychological Control		**.29****	**.21****	**.28****	**.18****
F-R Externalizing Behaviors			**.49****	**.93****	**.46****
F-R Internalizing Behaviors				**.44****	**.91****
MF-R Externalizing Behaviors					**.48****

Note: * *p* < *.05, ** p* < *.01*; F-R = Father-Reported, MF-R = Mother & Father – Reported

Parent Control and Externalizing and Internalizing Behaviors – Predictive Relationships

Following the Correlation analysis, Hierarchical Multiple Regression analyses were computed to examine the relative contribution of maternal and paternal parental control (behavioral, psychological) to adolescent's externalizing and internalizing behaviors. The results in relation to externalizing behaviors are presented first, followed by the results in relation to internalizing behaviors.

Externalizing Behaviors:

For mother-reported externalizing behaviors, mother behavioral control was entered in Block 1, explaining .8% of the variance of externalizing behaviors (r^2 = .008, Adjusted r^2 = .006). After entry of mother psychological control in Block 2 the total variance explained by the model as a whole was 11.5% (r^2 = .115, Adjusted r^2 = .112), F (2, 508) = 33.01, p < .0005. In the final model, only mother psychological control (β = .35, p < .0005) was statistically significant. Mother behavioral control did not significantly predict externalizing behaviors (even though, in simple regression analysis, mother behavioral control was significant in predicting mother-reported externalizing behaviors; F (1, 509) = 4.21, p < .05; β = .09, p < .05).

For father-reported externalizing behaviors, father-behavioral control was entered in Block 1, explaining 1.7% of the variance of externalizing behaviors (r^2 = .017, Adjusted r^2 = .014). After entry of father psychological control in Block 2 the total variance explained by the model as a whole was 8.3% (r^2 = .083, Adjusted r^2 = .079), F (2, 459) = 20.71, p < .0005. In the final model, only father psychological control (β = .30, p < .0005) was statistically significant in predicting externalizing behaviors. Father behavioral control did not reach statistical significance (even though, in simple regression analysis, father behavioral control was significant in predicting father-reported externalizing behaviors; F (1, 461) = 7.80, p < .05; β = .13, p < .05).

For the overall externalizing behaviors, mother behavioral control and father-behavioral control were entered in Block 1, explaining 1.7% of the variance of externalizing behaviors (r^2 = .017, Adjusted r^2 = .013). After entry of mother psychological control and father psychological control in Block 2 the total variance explained by the model as a whole was 13.1% (r^2 = .131, Adjusted r^2 = .123), F (4, 430) = 16.19, p < .0005. In the final model, again, only the psychological control predictors were statistically significant in predicting externalizing behaviors, with the mother psychological control predictor recording a higher beta value (β = .27, p < .0005) than the father psychological control predictor (β = .16, p < .05). The remaining two predictors; mother behavioral control, and father behavioral control were not found to significantly predict externalizing behaviors. Table 4.6. shows a summary (for the full sample, boys, and girls, respectively) of the hierarchical regression analyses of mother and father behavioral and psychological control on adolescent's externalizing behaviors.

Internalizing Behaviors:

For mother-reported internalizing behaviors, mother psychological control was entered in Block 1, explaining 2.2% of the variance of internalizing behaviors (r^2 = .022, Adjusted r^2 = .020). After entry of behavioral control in Block 2 the total variance explained by the model as a whole was 2.5% (r^2 = .025, Adjusted r^2 = .022), F (2, 509) = 6.63, p < .05. In the final model, only mother psychological control (β = .17, p < .05) was statistically significant in predicting internalizing behaviors. Mother behavioral control did not reach statistical significance.

For father-reported internalizing behaviors, father psychological control was entered in Block 1, explaining 4.3% of the variance of internalizing behaviors (r^2 = .043, Adjusted r^2 = .041). After entry of father behavioral control in Block 2 the total variance explained by the model as a whole was 4.4% (r^2 = .044, Adjusted r^2 = .040), F (2, 457) = 10.61, p

< .0005. In the final model, only one predictor – father psychological control (β = .23, p < .0005) – was statistically significant. Father behavioral control did not significantly predict father-reported internalizing behaviors.

For the overall internalizing behaviors, mother psychological control and father psychological control were entered in Block 1, explaining 3.9% of the variance of internalizing behaviors (r^2 = .039, Adjusted r^2 = .035). After entry of mother behavioral control and father behavioral control in Block 2 the total variance explained by the model as a whole was 4% (r^2 = .040, Adjusted r^2 = .032), F (4, 430) = 4.53, p < .05. In the final model, only father psychological control (β = .14, p < .05) was statistically significant in predicting internalizing behaviors. The remaining three predictors; mother psychological control, father behavioral control, and mother behavioral control did not significantly predict internalizing behaviors. Table 4.7. shows a summary (for the full sample, boys, and girls, respectively) of the hierarchical regression analyses of mother and father behavioral and psychological control on adolescent's internalizing behaviors.

Overall findings: The results regarding the first hypothesis of the study demonstrate that psychological control is an important factor in predicting adolescent's expression of both externalizing and internalizing behaviors. In other words, the more psychological control parents employ, the more externalizing or internalizing behaviors the adolescents' exhibit. Behavior control was not found to predict neither externalizing nor internalizing behaviors.

Table 4.6. Hierarchical regression analyses predicting adolescent's externalizing behaviors from parental control.

Dependent	Predictors	Full Sample β	Full Sample ΔR²	Boys β	Boys ΔR²	Girls β	Girls ΔR²
Mother-Reported Externalizing Behaviors	Block 1		.008		.003		.014
	Mother Behavioral Control	-.04		-.06		-.03	
	Block 2		.115		.108		.123
	Mother Psychological Control	**.35****		**.34****		**.36****	
Father-Reported Externalizing Behaviors	Block 1		.017		.023		.011
	Father Behavioral Control	-.03		-.02		-.03	
	Block 2		.083		.114		.054
	Father Psychological Control	**.30****		**.35****		**.25****	
Integrated Externalizing Behaviors	Block 1		.017		.025		.013
	Mother Behavioral Control	-.02		.00		-.06	
	Father Behavioral Control	.00		.01		.04	
	Block 2		.131		.155		.123
	Mother Psychological Control	**.27****		**.21***		**.34****	
	Father Psychological Control	**.16***		**.24***		.04	

Note: * $p < .05$, ** $p < .01$

Table 4.7. Hierarchical regression analyses predicting adolescent's internalizing behaviors from parental control.

		Full Sample		Boys		Girls	
Dependent	Predictors	β	ΔR^2	β	ΔR^2	β	ΔR^2
Mother-Reported Internalizing Behaviors	Block 1		.022		.021		.035
	Mother Psychological Control	**.17****		**.22****		**.18****	
	Block 2		.025		.070		.035
	Mother Behavioral Control	-.06		**-.23****		.01	
Father-Reported Internalizing Behaviors	Block 1		.043		.050		.056
	Father Psychological Control	**.23****		**.30****		**.23****	
	Block 2		.044		.067		.057
	Father Behavioral Control	-.04		-.15		.02	
Integrated Internalizing Behaviors	Block 1		.039		.054		.053
	Mother Psychological Control	.11		.17		.09	
	Father Psychological Control	**.14***		.16		.17	
	Block 2		.040		.083		.054
	Mother Behavioral Control	-.03		-.17		.03	
	Father Behavioral Control	-.00		-.01		-.01	

Note: * $p < .05$, ** $p < .01$

4.1.6. Hypothesis Two

Hypothesis two of the present research study states that parent-adolescent conflict will be significantly related to adolescents' exhibition of externalizing and internalizing behaviors. More specifically, it is hypothesized that parent-adolescent conflict will significantly positively predict both externalizing and internalizing behaviors.

Associations between parent-adolescent conflict and externalizing and internalizing behaviors

Prior to examining the predictive significance of parent-adolescent conflict on adolescents' externalizing and internalizing behaviors, bivariate correlations between the relevant scales were computed so as to identify possible associations among mother-adolescent conflict and father-adolescent conflict and adolescents' exhibition of externalizing and internalizing behaviors.

In regards to the mother, results showed that there were moderate and strong positive correlations between mother-adolescent conflict and mother-reported externalizing behaviors (r = .59, p < .0005), mother-reported internalizing behaviors (r = .45, p < .0005), and the integrated externalizing behaviors (r = .59, p < .0005) and integrated internalizing behaviors (r = .46, p < .0005), with high levels of mother-adolescent conflict associated with higher levels of externalizing and internalizing behaviors.

Likewise, as regards the father, father-adolescent conflict was moderately and strongly significantly related with father-reported externalizing behaviors (r = .56, p < .0005), father-reported internalizing behaviors (r = .48, p < .0005), and the integrated externalizing behaviors (r = .53, p < .0005) and integrated internalizing behaviors (r = .45, p < .0005), with high levels of father-adolescent conflict associated with higher

levels of externalizing and internalizing behaviors. Tables 4.8. and 4.9. detail these correlations for mother- and father-adolescent conflict, respectively.

Table 4.8. – Correlation Coefficients between mother-adolescent conflict and externalizing and internalizing behaviors

	M-R Externalizing Behaviors	M-R Internalizing Behaviors	MF-R Externalizing Behaviors	MF-R Internalizing Behaviors
Mother-Adolescent	**.59****	**.45****	**.58****	**.46****
M-R Externalizing Behaviors		**.46****	**.94****	**.44****
M-R Internalizing Behaviors			**.44****	**.92****
MF-R Externalizing Behaviors				**.48****

Note: * $p < .05$, ** $p < .01$; M-R = Mother-Reported, MF-R = Mother & Father – Reported

Table 4.9. – Correlation Coefficients between father-adolescent conflict and externalizing and internalizing behaviors

	F-R Externalizing Behaviors	F-R Internalizing Behaviors	MF-R Externalizing Behaviors	MF-R Internalizing Behaviors
Mother-Adolescent	**.56****	**.48****	**.53****	**.45****
F-R Externalizing Behaviors		**.49****	**.93****	**.46****
F-R Internalizing Behaviors			**.44****	**.91****
MF-R Externalizing Behaviors				**.48****

Note: * $p < .05$, ** $p < .01$; F-R = Father-Reported, MF-R = Mother & Father – Reported

Parent-Adolescent Conflict and Externalizing and Internalizing Behaviors – Predictive Relationships

To examine the relative contribution of parent-adolescent conflict to adolescent's level of externalizing and internalizing symptoms, simple regression analyses and multiple regression analyses were computed. The results in relation to externalizing behaviors are presented first, followed by the results in relation to internalizing behaviors.

Externalizing Behaviors:

For mother-reported externalizing behaviors, mother-adolescent conflict statistically significantly predicted externalizing behaviors (β = .59, p < .0005), F (1, 508) = 275.46, p < .0005, and accounted for 35.2% of the variance of externalizing symptoms (r^2 = .352, Adjusted r^2 = .350).

For father-reported externalizing behaviors, father-adolescent conflict statistically significantly predicted externalizing behaviors (β = .56, p < .0005), F (1, 459) = 213.33, p < .0005, and accounted for 31.7% of the variance of externalizing symptoms (r^2 = .317, Adjusted r^2 = .316).

Lastly, mother-adolescent conflict and father-adolescent conflict were used in a standard regression analysis to predict the overall (integrated) externalizing behaviors. The prediction model was significant, F (2, 431) = 143.36, p < .0005, and accounted for 39.9% of the variance of externalizing behaviors (r^2 = .399, Adjusted r^2 = .397). Externalizing behaviors were primarily predicted by mother-adolescent conflict (β = .42, p < .0005), and to a lesser extent by father-adolescent conflict (β = .29, p < .0005). Table 4.10. shows a summary (for the full sample, boys, and girls, respectively) of the simple and standard regression analyses of mother- and father-adolescent conflict on adolescent's externalizing behaviors.

Internalizing Behaviors:

For mother-reported internalizing behaviors, mother-adolescent conflict statistically significantly predicted internalizing behaviors (β = .45, p < .0005), *F* (1, 509) = 129.22, *p* < .0005, and accounted for 20.2% of the variance of internalizing symptoms (r^2 = .202, Adjusted r^2 = .201).

For father-reported internalizing behaviors, father-adolescent conflict statistically significantly predicted internalizing behaviors (β = .48, p < .0005), *F* (1, 457) = 139.19, *p* < .0005, and accounted for 23.3% of the variance of internalizing symptoms (r^2 = .233, Adjusted r^2 = .232).

Lastly, mother-adolescent conflict and father-adolescent conflict were used in a standard regression analysis to predict the overall (integrated) internalizing behaviors. The prediction model was significant, *F* (2, 431) = 75.91, *p* < .0005, and accounted for 26% of the variance of internalizing behaviors (r^2 = .260, Adjusted r^2 = .257). Internalizing behaviors were predicted by mother-adolescent conflict which recorded a minimally higher beta value (β = .29, p < .0005) than father-adolescent conflict (β = .28, p < .0005). Table 4.11. shows a summary (for the full sample, boys, and girls, respectively) of the simple and standard regression analyses of mother- and father-adolescent conflict on adolescent's internalizing behaviors.

Overall findings: The results regarding the second hypothesis of the study demonstrate that mother-adolescent conflict and father-adolescent conflict are both critical factors in the prediction of adolescent's expression of externalizing and internalizing behaviors. Accordingly, the more parent-adolescent relationship is characterized by negativity and hostility, the more externalizing or internalizing behaviors the adolescents will display.

Table 4.10. Simple and Standard regression analyses predicting adolescent's externalizing behaviors from parent-adolescent conflict.

		Full Sample		Boys		Girls	
Dependent	Predictors	β	ΔR^2	β	ΔR^2	β	ΔR^2
M-R Ext. Behaviors	Mother-Adolescent Conflict	**.59****	.352	**.59****	.350	**.61****	.377
F-R Ext. Behaviors	Father-Adolescent Conflict	**.56****	.317	**.49****	.243	**.65****	.420
Integrated Externalizing Behaviors	Mother-Adolescent Conflict	**.42****	.399	**.47****	.364	**.43****	.490
	Father-Adolescent Conflict	**.29****		**.20***		**.37****	

Note: * $p < .05$, ** $p < .01$; M-R = Mother-Reported, F-R = Father-Reported

Table 4.11. Simple and Standard regression analyses predicting adolescent's internalizing behaviors from parent-adolescent conflict.

		Full Sample		Boys		Girls	
Dependent	Predictors	β	ΔR^2	β	ΔR^2	B	ΔR^2
M- R Int. Behaviors	Mother-Adolescent Conflict	**.45****	.202	**.47****	.217	**.43****	.181
F-R Int. Behaviors	Father-Adolescent Conflict	**.48****	.233	**.47****	.220	**.48****	.233
Integrated Internalizing Behaviors	Mother-Adolescent Conflict	**.29****	.260	**.34****	.262	**.26****	.248
	Father-Adolescent Conflict	**.28****		**.23***		**.30****	

Note: * $p < .05$, ** $p < .01$; M-R = Mother-Reported, F-R = Father-Reported

4.1.7. Hypothesis Three

Hypothesis three of the present research study states psychopathic features of adolescents such as C-U traits, narcissism, and impulsivity will be significantly related to externalizing behaviors. More specifically, it is hypothesized that C-U traits, narcissism, and impulsivity will significantly positively predict externalizing behaviors.

Associations between psychopathic traits and externalizing behaviors

Prior to examining the predictive significance of adolescent psychopathic traits (C-U traits, narcissism, and impulsivity) on externalizing behaviors, bivariate correlations between all the relevant scales were computed so as to identify possible associations among those psychopathic traits and adolescent's exhibition of externalizing behaviors.

In regards to C-U traits, results showed that there were weak positive correlations between C-U traits and mother-reported externalizing behaviors (r = .16, p < .0005), father-reported externalizing behaviors (r = .19, p < .0005), and the integrated externalizing behaviors (r = .21, p < .0005), with high levels of C-U traits associated with higher levels of externalizing behaviors.

In regards to narcissism, results showed that there were weak positive correlations between narcissism and mother-reported externalizing behaviors (r = .20, p < .0005), father-reported externalizing behaviors (r = .19, p < .0005), and the integrated externalizing behaviors (r = .23, p < .0005), with high levels of narcissism associated with higher levels of externalizing behaviors.

In regards to impulsivity, results showed that there were moderate positive correlations between impulsivity and mother-reported externalizing behaviors (r = .31, p < .0005), father-reported externalizing behaviors (r = .32, p < .0005), and the integrated externalizing behaviors (r = .33, p < .0005), with high levels of impulsivity associated

with higher levels of externalizing behaviors. Table 4.12. details these correlations for C-U traits, narcissism, and impulsivity, respectively.

Table 4.12. – Correlation Coefficients between adolescent's psychopathic traits and externalizing behaviors

	Narcissism	Impulsivity	M-R Externalizing Behaviors	F-R Externalizing Behaviors	MF-R Externalizing Behaviors
C-U traits	**.57****	**.43***	**.16****	**.19****	**.21****
Narcissism		**.57****	**.20****	**.19****	**.23****
Impulsivity			**.31****	**.32****	**.33****
M-R Externalizing Behaviors				**.75****	**.94****
F-R Externalizing Behaviors					**.93****

Note: * $p < .05$, ** $p < .01$; M-R = Mother-Reported, F-R = Father-Reported, MF-R = Mother & Father – Reported

Psychopathic Traits and Externalizing Behaviors – Predictive Relationships

Following the Correlation analysis, Hierarchical Multiple Regression analyses were computed to examine the relative contribution of adolescent's psychopathic traits (C-U traits, impulsivity, and narcissism) to adolescent's externalizing behaviors.

For mother-reported externalizing behaviors, C-U traits was entered in Block 1, explaining 2.6% of the variance in mother-reported externalizing behaviors (r^2 = .026, Adjusted r^2 = .024). After entry of narcissism and impulsivity in Block 2 the total variance explained by the model as a whole was 9.9% (r^2 = .099, Adjusted r^2 = .094), F (3, 505) = 18.57, p < .0005. In the final model, only impulsivity was statistically significant (β = .29, p < .0005). Neither C-U traits nor narcissism significantly predicted mother-reported externalizing behaviors.

For father-reported externalizing behaviors, C-U traits was entered in Block 1, explaining 3.5% of the variance in father-reported externalizing behaviors (r^2 = .035, Adjusted r^2 = .033). After entry of narcissism and impulsivity in Block 2 the total variance explained by the model as a whole was 10.3% (r^2 = .103, Adjusted r^2 = .098), F (3, 458) = 18.61, p < .0005. Similar to mother-reported externalizing behaviors, in the final model, only impulsivity statistically significantly predicted externalizing behaviors (β = .29, p < .0005). The remaining two psychopathic traits – C-U traits, and narcissism – were not found to significantly predict father-reported externalizing behaviors.

For the overall externalizing behaviors, C-U traits was entered in Block 1, explaining 4.3% of the variance in father-reported externalizing behaviors (r^2 = .043, Adjusted r^2 = .041). After entry of narcissism and impulsivity in Block 2 the total variance explained by the model as a whole was 11.4% (r^2 = .114, Adjusted r^2 = .108), F (3, 431) = 18.56, p < .0005. In the final model, again, only impulsivity statistically significantly predicted externalizing behaviors (β = .28, p < .0005). The remaining two psychopathic

traits – C-U traits, and narcissism – were not found to significantly predict externalizing behaviors. Table 4.13. shows a summary (for the full sample, boys, and girls, respectively) of the hierarchical regression analyses of psychopathic traits on adolescent's externalizing behaviors.

Overall findings: The results regarding the third hypothesis of the study demonstrate that only impulsivity is an important factor for the prediction of adolescent's expression of externalizing behaviors. In other words, the more impulsive an adolescent is, the more aggressive and delinquent behaviors he will exhibit. The remaining two psychopathic traits; namely callous-unemotional traits and narcissism, were not found to be predictive of such behavior difficulties.

Table 4.13. Hierarchical regression analyses predicting adolescent's externalizing behaviors from adolescent's psychopathic traits.

			Full Sample		Boys		Girls	
Dependent	Predictors		β	ΔR²	β	ΔR²	β	ΔR²
Mother-Reported Externalizing Behaviors		Block 1		.026		.062		.010
	C-U Traits		.03		.10		-.00	
		Block 2		.099		.137		.080
	Narcissism		.02		.05		.02	
	Impulsivity		**.29****		**.29****		**.27****	
Father-Reported Externalizing Behaviors		Block 1		.035		.067		.013
	C-U Traits		.07		.10		.04	
		Block 2		.103		.160		.055
	Narcissism		-.01		.01		-.01	
	Impulsivity		**.29****		**.34****		**.22***	
Integrated Externalizing Behaviors		Block 1		.043		.072		.023
	C-U Traits		.07		.12		.05	
		Block 2		.114		.142		.093
	Narcissism		.03		.05		.03	
	Impulsivity		**.28****		**.28***		**.27****	

Note: * $p < .05$, ** $p < .01$

4.1.8. Hypothesis Four

Hypothesis four of the present research study states that psychopathic features of adolescents such as C-U traits, narcissism, and impulsivity will be significantly related to internalizing behaviors. More specifically, it is hypothesized that C-U traits, narcissism, and impulsivity will significantly positively predict internalizing behaviors.

Associations between psychopathic traits and internalizing behaviors

Prior to examining the predictive significance of adolescent psychopathic traits (C-U traits, narcissism, and impulsivity) on internalizing behaviors, bivariate correlations between all the relevant scales were computed so as to identify possible associations among those psychopathic traits and adolescent's exhibition of internalizing behaviors.

Results showed that there were no significant relationships between C-U traits, narcissism, and impulsivity, and externalizing and internalizing behaviors. Table 4.14. details these correlations.

Table 4.14. – Correlation Coefficients between adolescent's psychopathic traits and internalizing behaviors

	Narcissism	Impulsivity	M-R Internalizing Behaviors	F-R Internalizing Behaviors	MF-R Internalizing Behaviors
C-U traits	**.56****	**.43****	-.00	.03	.04
Narcissism		**.57****	-.03	.01	.01
Impulsivity			.05	.07	.06
M-R Internalizing Behaviors				**.68****	**.92****
F-R Internalizing Behaviors					**.91****

Note: * $p < .05$, ** $p < .01$; M-R = Mother-Reported, F-R = Father-Reported, MF-R = Mother & Father – Reported

Psychopathic Traits and Internalizing Behaviors – Predictive Relationships

Following the Correlation analysis, Multiple Regression analyses were computed to examine the relative contribution of adolescent's psychopathic traits (C-U traits, impulsivity, and narcissism) to adolescent's internalizing behaviors.

For mother-reported internalizing behaviors, the predictor model was not statistically significant, F (3, 506) = 1.12, p > .05, and accounted for merely .7% (r^2 = .026, Adjusted r^2 = .024). None of the three psychopathic traits were found to be statistically significant in predicting mother-reported internalizing behaviors. Nevertheless, for boys only, impulsivity was found to be predictive of mother-reported internalizing behaviors, F (3, 200) = 2.79, p > .05; β = .22, p < .005, with the total variance explained by the model as a whole being 4% (r^2 = .040, Adjusted r^2 = .026).

Likewise, for father-reported internalizing behaviors, the predictor model was not statistically significant, F (3, 456) = .86, p > .05, and accounted for merely .6% (r^2 = .006, Adjusted r^2 = -.001). None of the three psychopathic traits were found to be statistically significant in predicting father-reported internalizing behaviors.

Lastly, for the overall internalizing behaviors, once again, the predictor model was not statistically significant, F (3, 431) = .89, p > .05. None of the three psychopathic traits; C-U traits, narcissism, and impulsivity, were statistically significant in predicting internalizing behaviors. Table 4.15. shows a summary (for the full sample, boys, and girls, respectively) of the standard regression analyses of psychopathic traits on adolescent's internalizing behaviors.

Overall findings: The results regarding the fourth hypothesis of the study demonstrate that none of the three psychopathic traits – C-U traits, narcissism, and impulsivity – are predictive of adolescent's experiences of internalizing symptoms.

Table 4.15. Standard regression analyses predicting adolescent's internalizing behaviors from adolescent's psychopathic traits.

		Full Sample		Boys		Girls	
Dependent	Predictors	β	ΔR²	β	ΔR²	β	ΔR²
Mother-Reported Externalizing Behaviors	C-U Traits	.01	.007	-.01	.040	.08	.006
	Narcissism	-.08		-.04		-.04	
	Impulsivity	.09		**.22****		.04	
Father-Reported Externalizing Behaviors	C-U Traits	.01	.006	-.09	.028	.12	.018
	Narcissism	-.05		.05		-.07	
	Impulsivity	.09		.17		.08	
Integrated Externalizing Behaviors	C-U Traits	.04	.006	.01	.025	.133	.021
	Narcissism	-.06		.04		-.07	
	Impulsivity	.08		.13		.09	

Note: * $p < .05$, ** $p < .01$

4.1.9. Hypothesis Five

Hypothesis five of the present research study states that the relationship between parent control, parent-adolescent conflict and adolescents' exhibition of externalizing and internalizing behaviors will be significantly moderated by the adolescents' psychopathic features. More specifically, it is hypothesized that the association between parenting practices, parent-adolescent conflict, and externalizing and internalizing behaviors will be significantly stronger for adolescents with C-U traits, narcissism, and impulsivity.

Psychopathic Traits, Parent Control and Parent-Adolescent Conflict, and Externalizing and Internalizing Behaviors – Moderation Analyses

Moderation analyses were conducted using the PROCESS macro for SPSS (Model 1; Hayes, 2013). The results in relation to C-U traits are presented first, followed by the results in relation to narcissism, and then impulsivity.

C-U Traits

Results indicated that the relationship between mother psychological control and externalizing behaviors was moderated by the presence of C-U traits (F (3, 301) = 12.12, $p < .05$) for girls only, and the model accounted for 14% of the variance of externalizing behaviors. More specifically, the moderation effect was stronger for adolescent girls with low (beta = .23, p < .005) versus medium and high C-U traits (beta = .18, p < .005; beta = .14, p < .005, respectively; see Figure 4.1.). Therefore, and as it can be seen from Figure 4.1., as mother psychological control increased, compared with girls with medium and high C-U traits, it was girls with low C-U traits that exhibited more externalizing behaviors.

As regards parent-adolescent conflict, results showed that, for boys, the relationship between father-adolescent conflict and externalizing behaviors was moderated by the presence of C-U traits (F (3, 173) = 23.93, p < .05), and this accounted for 29% of the variance of externalizing behaviors. More specifically, the moderation effect was substantially stronger for adolescent boys with high C-U traits (beta = .71, p < .005) versus medium and low C-U traits (beta = .54, p < .005; beta = .36, p < .005, respectively; see Figure 4.2.). This moderation was also found for adolescent girls; in other words, the relationship between father-adolescent conflict and externalizing behaviors was moderated by the presence of C-U traits (F (3, 253) = 24.31, p < .05), and this accounted for 38% of the variance of externalizing behaviors. The moderation effect was, nevertheless, stronger for adolescent girls with low C-U traits (beta = .60, p < .005) versus medium and high C-U traits (beta = .53, p < .005; beta = .47, p < .005, respectively; see Figure 4.3.). In other words, and as we can see from Figure 4.2., for boys, when father-adolescent conflict is high, so are externalizing behaviors; nevertheless, they are more so in adolescents with high C-U traits than in those with low C-U traits. In contrast, for girls, it was found that as father-adolescent conflict increases, it is girls with low C-U traits that exhibit more externalizing behaviors.

Lastly, the relationship between father-adolescent conflict and internalizing behaviors was moderated by the presence of C-U traits (F (3, 264) = 25.03, p < .05) for girls only, and the model accounted for 24% of the variance of internalizing behaviors. The moderation effect was slightly stronger for adolescent girls with high C-U traits (beta = .36, p < .005) versus medium and low C-U traits (beta = .32, p < .005; beta = .28, p < .005, respectively; see Figure 4.4.). Consequently, and as it can be seen from Figure 4.4., when father-adolescent conflict is low, experiences of internalizing behaviors are similar for girls regardless of the presence of C-U traits; however, when

father-adolescent conflict is high, internalizing behaviors are more evident in girls with high C-U traits than in those with medium or low C-U traits. Tables 4.16. and 4.17. show a summary of the moderation effects of C-U traits on parent-adolescent control and parent-adolescent conflict on adolescent's externalizing and internalizing behaviors.

Table 4.16. Moderation analysis investigating the moderation effect of C-U traits on the relationship between parent control, parent-adolescent conflict, and externalizing behaviors.

	Boys				Girls			
	b	*SE B*	*t*	*p*	*b*	*SE B*	*t*	*p*
Constant					3.94 [3.51, 4.38]	.22	18.00	$p < .05$
C-U Traits					.01 [-.04, .06]	.03	.53	$p > .05$
M. Psych. Control					.18 [.11, .25]	.04	4.96	$p < .05$
C-U x M. Psych. Control					**-.01 [-.01, .00]**	**.00**	**-2.36**	***p* < .05***
Constant	7.72 [6.67, 8.77]	.53	14.55	$p < .05$	7.24 [6.57, 7.91]	.34	21.34	$p < .05$
C-U Traits	.21 [.09, .34]	.06	3.35	$p < .05$	.05 [-.02, .12]	.04	1.36	$p > .05$
F-A Conflict	.54 [.39, .69]	.08	7.09	$p < .05$	.53 [.38, .68]	.07	7.13	$p < .05$
C-U x F-A Conflict	**.02 [.01, .04]**	**.01**	**2.65**	***p* < .05****	**-.01 [-.01, .00]**	**.00**	**-2.11**	***p* < .05*****

Note: * $R^2 = .14$; ** $R^2 = .29$; *** $R^2 = .38$

Table 4.17. Moderation analysis investigating the moderation effect of C-U traits on the relationship between parent-adolescent conflict and internalizing behaviors.

	Boys				Girls			
	b	*SE B*	*t*	*p*	*b*	*SE B*	*t*	*p*
Constant					6.71 [6.13. 7.29]	.30	22.74	$p < .05$
C-U Traits					.01 [-.04, .07]	.03	.46	$p > .05$
F-A Conflict					.32 [.23, .42]	.05	6.63	$p < .05$
C-U x F-A Conflict					**.00 [.00, .01]**	**.00**	**2.36**	***p* < .05***

Note: * $R^2 = .24$

Figure 4.1. Simple slopes of the association between mother-psychological control and externalizing behaviors, for girls, at low, mean, and high levels of C-U traits.

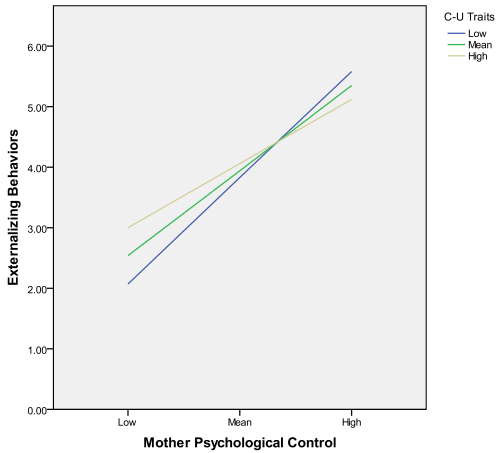


Figure 4.2. Simple slopes of the association between father-adolescent conflict and externalizing behaviors, for boys, at low, mean, and high levels of C-U traits.

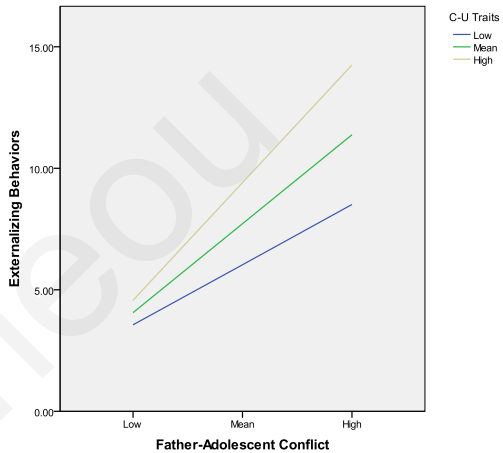


Figure 4.3. Simple slopes of the association between father-adolescent conflict and externalizing behaviors, for girls, at low, mean, and high levels of C-U traits.

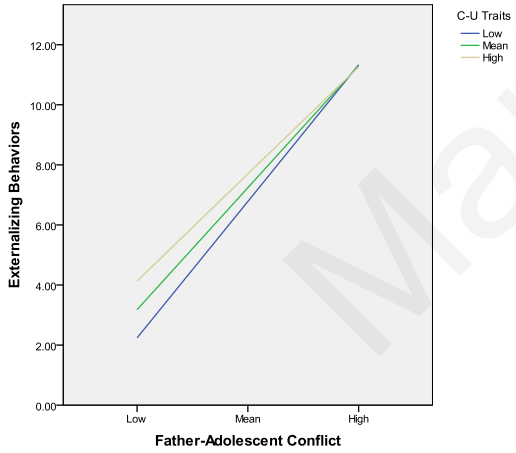
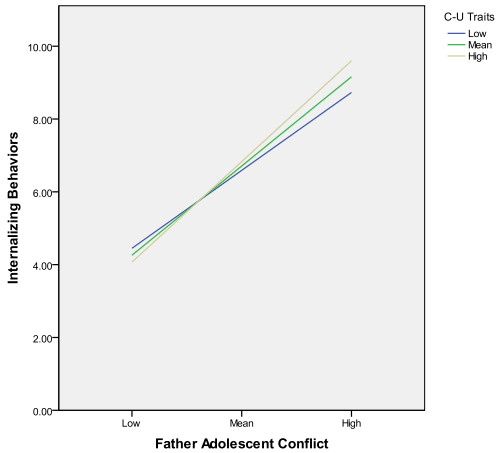


Figure 4.4. Simple slopes of the association between father-adolescent conflict and internalizing behaviors, for girls, at low, mean, and high levels of C-U traits.



Narcissism

As regards narcissism, results showed that father psychological control was significantly positively associated with internalizing behaviors in girls with medium (beta = .17, p < .005) and high (beta = .27, p < .005) levels of narcissism, but not in girls with low (beta = .07, p > .005; see Figure 4.5.) levels of narcissism, F (3, 265) = 5.21, p < .05, with the total variance explained by the model as a whole being 8%. What this means is that, when father psychological control is high, girls with high levels of narcissism exhibit more internalizing behaviors than girls with mean levels of narcissism. Table 4.18. shows a summary of the moderation effect of narcissism on the relationship between father psychological control and adolescent's internalizing behaviors.

Impulsivity

As regards impulsivity, the relationship between mother-adolescent conflict and externalizing behaviors was moderated by the presence of impulsivity, F (3, 202) = 60.68, p < .05, for boys only, and the model accounted for 40% of the variance of externalizing behaviors. The moderation effect was stronger for adolescent boys with high levels of impulsivity (beta = .33, p < .005) versus medium and low levels of impulsivity (beta = .27, p < .005; beta = .22, p < .005, respectively; see Figure 4.6.). As it can be seen from Figure 4.6., when mother-adolescent conflict is high, it is adolescents who are more impulsive that exhibit more aggressive and delinquent behaviors. Table 4.19. shows a summary of the moderation effect of impulsivity on the relationship between mother-adolescent conflict and adolescent's externalizing behaviors.

Overall findings: The results regarding the fifth hypothesis of the study demonstrate that the relationship between certain specific aspects of parenting and externalizing and

internalizing behaviors is moderated by the presence of adolescent's psychopathic traits. More specifically, C-U traits moderated the relationships between mother psychological control and externalizing behaviors (for girls only), father-adolescent conflict and externalizing behaviors, and father-adolescent conflict and internalizing behaviors (for girls only); narcissism moderated the relationship between father psychological control and internalizing behaviors (for girls only); and impulsivity moderated the relationship between mother-adolescent conflict and externalizing behaviors (for boys only).

Table 4.18. Moderation analysis investigating the moderation effect of narcissism on the relationship between parent control and internalizing behaviors.

	Boys				Girls			
	b	*SE B*	*t*	*p*	*b*	*SE B*	*t*	*P*
Constant					6.58 [5.95. 7.20]	.32	20.78	$p < .05$
Narcissism					-.03 [-.09, .03]	.03	-.96	$p > .05$
F. Psych. Control					.17 [.08, .27]	.05	3.61	$p < .05$
Narcissism x F. Psych. Control					**.01 [.00, .02]**	**.00**	**2.06**	***p* < .05***

Note: * $R^2 = .08$

Table 4.19. Moderation analysis investigating the moderation effect of impulsivity on the relationship between parent-adolescent conflict and externalizing behaviors.

	Boys				Girls			
	b	*SE B*	*t*	*p*	*b*	*SE B*	*t*	*P*
Constant	3.94 [3.42. 4.46]	.26	14.93	$p < .05$				
Impulsivity	.09 [.04, .15]	.03	3.21	$p < .05$				
M-A Conflict	.27 [.19, .35]	.04	6.78	$p < .05$				
Impulsivity x M-A Conflict	**.01 [.00, .01]**	**.00**	**2.30**	***p* < .05***				

Note: * $R^2 = .40$

Figure 4.5. Simple slopes of the association between father psychological control and internalizing behaviors, for girls, at low, mean, and high levels of narcissism.

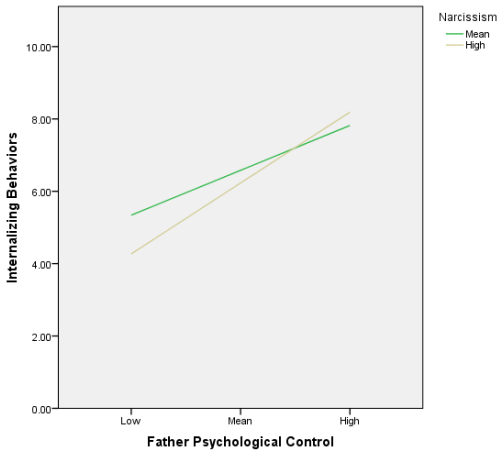
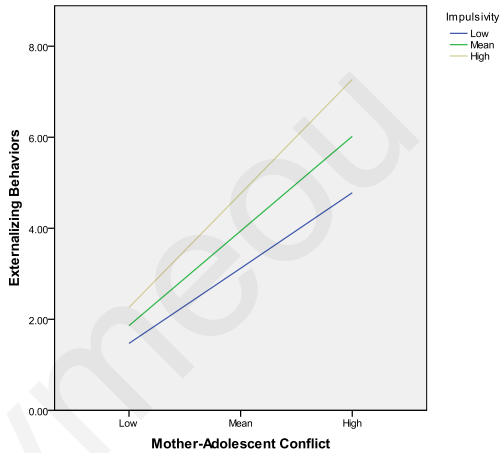


Figure 4.6. Simple slopes of the association between mother-adolescent conflict and externalizing behaviors, for boys, at low, mean, and high levels of impulsivity.



4.1.10. Hypothesis Six

Hypothesis six of the present research study states that, when considering maternal and paternal significance for the development of adolescents' externalizing and/or internalizing difficulties, both parents will be statistically important in determining the adolescents' behavioral and psychosocial well-being. The findings of the present study regarding hypotheses one and two do support the hypothesis of significance of both parents for adolescent's behavioral and psychosocial well-being.

In regards to parental control, both mother psychological control and father psychological control were statistically significant in predicting the overall (integrated) externalizing behaviors; nonetheless, mother psychological control predictor recorded a somewhat higher beta value ($\beta = .27$, $p < .0005$) than the father psychological control predictor ($\beta = .16$, $p < .05$). For internalizing behaviors though, compared to father psychological control ($\beta = .14$, $p < .05$), mother psychological control ($\beta = .11$, $p > .05$) was not found to be a statistically significant predictor of internalizing symptoms.

In regards to parent-adolescent conflict, both mother-adolescent conflict and father-adolescent conflict significantly predicted externalizing behaviors, with mother-adolescent conflict recording a higher beta value ($\beta = .42$, $p < .0005$) than father-adolescent conflict ($\beta = .29$, $p < .0005$). Similar findings were found for internalizing behaviors; nevertheless the beta value of mother-adolescent conflict predicting internalizing behaviors was only minimally higher than father-adolescent conflict ($\beta = .29$, $p < .0005$, $\beta = .28$, $p < .0005$, respectively).

4.1.11. Summary of findings from Phase I

Data analyses from the first phase of the study yielded important findings in regards to which aspects of parenting and adolescent's psychopathic traits are important in the

prediction of adolescents' experiences of externalizing and internalizing behaviors. More specifically:

❖ Psychological control was positively associated to both externalizing and internalizing symptomatology. In other words, parental use of psychological control positively predicted externalizing behaviors, such as aggression and delinquency, and internalizing behaviors, such as withdrawal symptoms, somatic problems, and anxious/depressed symptoms. Specifically, for the integrated scores, use of mother psychological control was somewhat more important than use of father psychological control in predicting externalizing behaviors, whereas for internalizing behaviors, only father psychological control had a predictive power.

❖ Parent-adolescent conflict was also positively predictive of externalizing and internalizing behaviors. In essence, when parent-adolescent relationship was characterized by negativity and conflict, this had adverse consequences on adolescent's behavioral and psychosocial adjustment. Additionally, adolescent's relationship with both parents was found to be important. Nevertheless, externalizing behaviors were primarily predicted by mother-adolescent conflict and to a lesser extent by father-adolescent conflict. Similar findings were also obtained as regards internalizing symptoms, even though mother-adolescent conflict was only minimally more important than father-adolescent conflict in predicting internalizing symptoms.

❖ Impulsivity was found to be important in predicting externalizing behaviors. What this means, is that the more adolescents presented the characteristics of an impulsive personality (e.g., tendency to act quickly and without reflection), the more externalizing symptoms, such as aggressive and delinquent behaviors, they exhibited.

Likewise, in addition to direct relationships being established, results also showed that the relationship between some aspects of parenting and externalizing and internalizing behaviors was moderated by adolescent's psychopathic traits. More specifically:

❖ C-U traits were found to moderate certain aspects of parenting and behavior difficulties in adolescence. In particular, the presence of C-U traits moderated the relationship between mother psychological control and girls' externalizing behaviors; that is, use of maternal psychological control was more strongly positively related to externalizing behaviors when adolescent girls had higher C-U traits. Further, the relationship between father-adolescent conflict and externalizing behaviors was moderated by the presence of C-U traits. Nevertheless, opposite effects were noted for boys and girls; for boys, the relationship between father-adolescent conflict and externalizing behaviors was stronger for adolescents with high C-U traits, whereas for girls, it was found that as father-adolescent conflict increased, it was girls with low C-U traits that demonstrated increasing amounts of externalizing behaviors. And lastly, C-U traits also moderated the relationship between father-adolescent conflict and girls' internalizing behaviors. When father-adolescent conflict was low, experiences of internalizing behaviors were similar for all adolescent girls; however, when father-adolescent conflict was high, internalizing behaviors were more evident in girls with high C-U traits.

❖ Narcissism moderated the relationship between father psychological control and girls' internalizing behaviors; in other words, father psychological control was more strongly positively related to internalizing behaviors when adolescent girls had high levels of narcissism.

❖ Finally, for boys, the relationship between mother-adolescent conflict and externalizing behaviors was moderated by impulsivity; that is, when mother-adolescent

conflict was high, aggressive and delinquent behaviors were more evident in adolescent boys who were more impulsive than adolescent boys with mean or low levels of impulsivity.

❖ One other important finding of the study was that both parents were significant for the behavioral and psychosocial well-being of their adolescent children. For example, both mother and father psychological control were important predictors of externalizing and internalizing behaviors, with higher psychological control being positively related to experiences of externalizing and internalizing behaviors. Moreover, both mother-adolescent conflict and father-adolescent conflict were predictive of externalizing and internalizing behaviors; that is, parent-adolescent relationship which was characterized by negativity and hostility was positively related to externalizing and internalizing behaviors, such as aggression, delinquency, and anxious/depressed symptoms.

❖ Finally, supplementary data analyses yielded important group differences; for example, the presence of sex differences in the presence of psychopathic traits was established, with boys scoring higher than girls in all three dimensions of psychopathy. Sex differences were also noted for internalizing behaviors, with girls displaying more internalizing symptoms than boys. Furthermore, group differences were also noted in regards to the three facets of psychopathy. More specifically, adolescents who were reported as exhibiting externalizing behaviors, demonstrated to a much greater degree characteristics such as superficial charm, lack of guilt and empathy, arrogant behaviors, and impulsive actions than adolescents who did not display increasing levels of externalizing behaviors. Finally, differences were also found for fathers and mothers. Fathers demonstrated more behavioral control tactics than mothers, whereas mothers used more psychological control tactics than fathers, and lastly, for both boys and girls, mother-adolescent conflict was higher than father-adolescent conflict.

4.2. Phase II – Quasi-Experimental

4.2.1. Reliability Analyses

To determine the degree to which the two questionnaires used in second phase of the present research study are reliable, internal consistency reliability analyses (Cronbach's alpha) of the items measured on the Dysexecutive Questionnaire – Self-Report (DEX; Wilson et al., 1996), and the Youth Self-Report (YSR; Achenbach & Rescorla, 2001) were conducted. Reliability indices for all scales are summarized as follows and presented in Table 4.20.

The Dysexecutive Questionnaire – Self-Report (DEX)

The everyday signs of the dysexecutive symptoms were examined by means of the Dysexecutive Questionnaire (DEX). The scale consists of 37 items designed to assess four areas of functioning associated with executive difficulties: emotional and personality changes, motivational changes, behavioral changes, and cognitive changes. Similar to previous studies which have reported high internal consistency (>.8) when using the DEX questionnaire (Gerstorf et al., 2008; Magar et al., 2008), the present study also reported high internal consistency values; Cronbach alpha reliability for the total DEX scale was satisfactory (α = .93). Likewise, when considering the four areas of functioning associated with executive difficulties distinctively, satisfactory internal consistency values (Cronbach alpha coefficients) were also found; α = .89 for behavioral changes; α = .84 for motivational changes; α = .78 for emotional and personality changes; and α = .78 for cognitive changes.

The Youth Self-Report (YSR)

The 40-item scale used in the present study (wherein adolescents report on their own behavioral and emotional problems) group into two higher order factors – externalizing (delinquency and aggression) and internalizing (withdrawal symptoms, somatic complaints, and anxious/depressed syndromes) behaviors.

In the present study, Cronbach's alpha was .83 for externalizing behaviors and .87 for internalizing behaviors. The α coefficient for the total YSR scale was also satisfactory (α = .88).

Table 4.20. Cronbach's alpha of the Dysexecutive Questionnaire (DEX), and the Youth Self-Report (YSR).

Construct	*Cronbach's alpha*
Dysexecutive Symptoms	
Behavioral Changes	*.89*
Motivational Changes	*.84*
Emotional and Personality Changes	*.78*
Cognitive Changes	*.78*
Adolescent Problems	
Externalizing Behaviors	*.83*
Internalizing Behaviors	*.87*

4.2.2. Descriptive Analysis

As all the quantitative measures used in the second phase of the research study (the Dysexecutive Questionnaire, and the Youth Self-Report) showed satisfactory Cronbach's alphas (see Table 4.20.), composite variables for each construct were computed.

In regards to dysexecutive symptoms, four factors were computed: Behavioral Changes, Motivational Changes, Emotional and Personality Changes, and Cognitive Changes. In regards to adolescents' externalizing and internalizing behaviors, two factors were computed: Externalizing Behaviors (= delinquent behaviors subscale, and aggressive behaviors subscale), and Internalizing Behaviors (= withdrawal symptoms subscale, somatic symptoms subscale, and anxious/depressed symptoms subscale). Table 4.21. presents the means and standard deviations for each construct.

Furthermore, table 4.21. also presents the means and standard deviations of: (a) the proportion of responses to stop trials of the GoStop at each of the four stop delays (50,150, 250, and 350 ms), with lower proportion of response inhibition to stop trials being indicative of higher impulsivity; *and*, (b) the preference for smaller–sooner over larger–later rewards of the Two Choice Impulsivity Paradigm, where increased preference for smaller-sooner choices rather than larger-later choices is interpreted as an indicator of greater impulsivity.

Table 4.21. Means and standard deviations of the composite scores of the scales of the Dysexecutive Questionnaire (DEX), and the Youth Self-Report (YSR), as well as, of the GoStop Impulsivity Paradigm and Two Choice Impulsivity Paradigm.

	Ext. Behaviors		Int. Behaviors	
	Mean	SD	Mean	SD
Behavioral Changes	29.78	8.71	27.89	9.96
Motivational Changes	17.17	4.63	15.67	4.72
Emotional and Personality Changes	19.89	5.82	18.39	4.89
Cognitive Changes	23.17	5.82	22.94	6.44
50ms Stop Delay (Block 1)	66.67	23.52	60.00	27.23
150ms Stop Delay (Block 1)	56.11	22.00	45.56	20.64
250ms Stop Delay (Block 1)	43.33	20.86	32.22	18.96
350ms Stop Delay (Block 1)	34.44	18.22	25.56	13.82
50ms Stop Delay (Block 2)	70.00	27.44	66.11	24.29
150ms Stop Delay (Block 2)	63.33	23.01	50.56	24.13
250ms Stop Delay (Block 2)	52.78	25.62	37.22	19.34
50ms Stop Delay (Block 2)	30.56	24.12	26.11	19.45
50ms Stop Delay (Combined)	68.33	23.07	63.06	22.37
150ms Stop Delay (Combined)	59.72	20.40	48.06	19.19
250ms Stop Delay (Combined)	47.78	21.02	34.72	14.50
350ms Stop Delay (Combined)	32.50	19.65	25.83	13.42
Smaller-Sooner Rewards	15.65	13.76	18.67	15.14
Externalizing Behaviors (*N* = 18)	8.56	5.56	n/a	n/a
Internalizing Behaviors (*N* = 18)	n/a	n/a	13.44	9.14

4.2.3. Preliminary Analyses

Comparisons between adolescent participants who agreed and adolescent participants who did not agree to participate in the second phase of the study

Independent-samples t-tests, using Bonferroni adjusted alpha levels of .025 per test (.05/2), were computed to compare the scores on externalizing and internalizing behaviors between those participants who showed interest in participating in the second phase of the study, and those participants who did not.

In regards to externalizing behaviors, there was no significant difference in scores for the adolescent participants who were interested in participating in the quasi-experimental phase of the study (M = 7.18, SD = 6.75) and the adolescent participants who were not (M = 7.78, SD = 7.72), $t(434) = -.85$, $p > .05$, and this represented a small–sized effect, $r = .04$.

Likewise, for internalizing behaviors, there was no statistical difference in scores for the adolescent participants who were interested in participating in the quasi-experimental phase of the study (M = 12.12, SD = 10.12) and the adolescent participants who were not (M = 12.81, SD = 9.26), $t(434) = -.75$, $p > .05$, and this represented a small–sized effect, $r = .04$.

Comparisons between the low/high externalizing behavior groups' dysexecutive symptoms

Mann-Whitney U tests, using Bonferroni adjusted alpha levels of .013 per test (.05/4), were conducted to compare the two subgroups' dysexecutive symptoms. In regards to behavioral changes, the Mann-Whitney U test revealed that adolescents high on externalizing behaviors (Mdn = 28.00) did not differ significantly from adolescents low on externalizing behaviors (Mdn = 27.00), $U = 59.00$, $z = 1.64$, $p = .113$, $r = .39$. Similar

results were obtained for motivational changes (Low: *Mdn* = 16.00; High: *Mdn* = 16.00; *U* = 54.00, *z* = 1.21, *p* = .258, *r* = .29), emotional and personality changes (Low: *Mdn* = 18.00; High: *Mdn* = 21.00; *U* = 42.00, *z* = .13, *p* = .93, *r* = .03), and cognitive changes (Low: *Mdn* = 19.00; High: *Mdn* = 25.00; *U* = 59.50, *z* = 1.68, *p* = .904, *r* = .38).

Comparisons between the low/high internalizing behavior groups' dysexecutive symptoms

Mann-Whitney U tests, using Bonferroni adjusted alpha levels of .013 per test (.05/4), were conducted to compare the two subgroups' dysexecutive symptoms. Overall, no statistical differences were found between participants in the low internalizing behaviors group and participants in the high internalizing behaviors group either for behavioral changes (Low: *Mdn* = 27.00; High: *Mdn* = 25.00; *U* = 50.00, *z* = .84, *p* = .436, *r* = .20), motivational changes (Low: *Mdn* = 15.00; High: *Mdn* = 16.00; *U* = 53.50, *z* = 1.16, *p* = .258, *r* = .27), emotional and personality changes (Low: *Mdn* = 17.00; High: *Mdn* = 20.00; *U* = 67.00, *z* = 2.36, *p* = .019, *r* = .56), and cognitive changes (Low: *Mdn* = 21.00; High: *Mdn* = 28.00; *U* = 54.50, *z* = 1.24, *p* = .222, *r* = .29).

Comparisons between the two blocks of the GoStop Impulsivity Paradigm for externalizing behaviors

Wilcoxon Signed Rank Tests were computed, using Bonferroni adjusted alpha levels of .013 per test (.05/4), to compare the responses of the participants in the two blocks of the GoStop Impulsivity Paradigm (Block 1: 50ms, 150ms, 250ms, 350ms; Block 2: 50ms, 150ms, 250ms, 350ms).

For the 50ms stop delay, there was no statistically significant difference in the proportion of responses between block 1 (*Mdn* = 65.00) and block 2 (*Mdn* = 80.00), *T* =

48.50, *p* = .453, *r* = .18. Similar results were obtained for the 150ms stop delay (Block 1: *Mdn* = 55.00; Block 2: *Mdn* = 70.00; *T* = 89.00, *p* = .095, *r* = .39), 250ms stop delay (Block 1: *Mdn* = 40.00; Block 2: *Mdn* = 50.00; *T* = 92.50, *p* = .060, *r* = .44), and the 350ms stop delay (Block 1: *Mdn* = 30.00; Block 2: *Mdn* = 30.00; *T* = 25.50, *p* = .283, *r* = -.25).

Given that the Wilcoxon Signed Rank Tests found no differences in responses across the two blocks, the combined proportion of responses for each stop delay will be used in further analyses.

Comparisons between the two blocks of the GoStop Impulsivity Paradigm for internalizing behaviors

Wilcoxon Matched-Pair Signed Rank Tests were computed, using Bonferroni adjusted alpha levels of .013 per test (.05/4), to compare the responses of the participants in the two blocks of the GoStop Impulsivity Paradigm (Block 1: 50ms, 150ms, 250ms, 350ms; Block 2: 50ms, 150ms, 250ms, 350ms).

For the 50ms stop delay, there was no statistically significant difference in the proportion of responses between block 1 (*Mdn* = 60.00) and block 2 (*Mdn* = 65.00), *T* = 67.00, *p* = .359, *r* = .22. Similar results were obtained for the 150ms stop delay (Block 1: *Mdn* = 45.00; Block 2: *Mdn* = 55.00; *T* = 58.00, *p* = .379, *r* = .21), 250ms stop delay (Block 1: *Mdn* = 35.00; Block 2: *Mdn* = 35.00; *T* = 70.50, *p* = .548, *r* = .14), and the 350ms stop delay (Block 1: *Mdn* = 25.00; Block 2: *Mdn* = 20.00; *T* = 43.50, *p* = .887, *r* = -.03).

Given that the Wilcoxon Signed Rank Tests found no differences in responses across the two blocks, the combined proportion of responses for each stop delay will be used in further analyses.

Comparisons between the low/high externalizing behavior groups' performance on measures of impulsivity

Mann-Whitney U tests were conducted, using Bonferroni adjusted alpha levels of .01 per test (.05/5), to compare the performance of the two subgroups in the behavioral measures of impulsivity. Findings from the analyses contradict those obtained from the analyses of the first phase of the study (see chapter 4, section 4.1.3.).

In regards to the GoStop Impulsivity Paradigm, no significant differences were found in scores for the low externalizing behaviors group and the high externalizing behaviors group for neither the 50ms stop delay (Low: *Mdn* = 75.00; High: *Mdn* = 60.00; *U* = 29.00, *z* = -1.02, *p* = .340, *r* = .24), 150ms stop delay (Low: *Mdn* = 60.00; High: *Mdn* = 65.00; *U* = 40.50, *z* = .00, *p* = 1.000, *r* = .00), 250ms stop delay (Low: *Mdn* = 45.00; High: *Mdn* = 45.00; *U* = 47.50, *z* = .621, *p* = .546, *r* = .15), or the 350ms stop delay (Low: *Mdn* = 30.00; High: *Mdn* = 50.00; *U* = 53.50, *z* = 1.16, *p* = .258, *r* = .27). Likewise, no significant difference was found between the low externalizing behaviors group (*Mdn* = 9.00) and the high externalizing behaviors groups (*Mdn* = 15.00), *U* = 53.50, *z* = 1.15, *p* = .250 in regards to the choice for smaller/sooner rewards rather than larger/later rewards, and this represented a medium–sized effect, *r* = .27.

Comparisons between the low/high internalizing behavior groups' performance on measures of impulsivity

Mann-Whitney U tests were conducted, using Bonferroni adjusted alpha levels of .01 per test (.05/5), to compare the performance of the two subgroups in the behavioral measures of impulsivity. Findings from the analyses are mostly consistent with the results obtained from the analyses of the first phase of the study (see chapter 4, section 4.1.3.).

In regards to the GoStop Impulsivity Paradigm, no significant differences were found in scores for the low internalizing behaviors group and the high internalizing behaviors group for neither the 50ms stop delay (Low: *Mdn* = 70.00; High: *Mdn* = 60.00; *U* = 37.00, *z* = -.31, *p* = .796, *r* = -.07), 150ms stop delay (Low: *Mdn* = 50.00; High: *Mdn* = 45.00; *U* = 48.00, *z* = .67, *p* = .546, *r* = .16), 250ms stop delay (Low: *Mdn* = 30.00; High: *Mdn* = 45.00; *U* = 52.00, *z* = 1.03, *p* = .340, *r* = .24), or the 350ms stop delay (Low: *Mdn* = 20.00; High: *Mdn* = 30.00; *U* = 61.50, *z* = 1.87, *p* = .063, *r* = .44). Likewise, no significant difference was found between the low internalizing behaviors group (*Mdn* = 9.00) and the high internalizing behaviors groups (*Mdn* = 27.00), *U* = 63.00, *z* = 1.99, *p* = .050 in regards to the choice for smaller/sooner rewards rather than larger/later rewards, and this represented a large–sized effect, *r* = .46.

4.2.4. Data Associations

Correlations between the impulsivity construct, impulsivity's subscales (Thrill-Seeking, Irresponsibility, and Impulsiveness), the GoStop Impulsivity Paradigm, and the Two Choice Impulsivity Paradigm

The relationship between the quantitative and behavioral measures of impulsivity was examined using Correlation analysis (Spearman's correlation coefficient). For participants in the low/high externalizing behaviors group, results showed some associations between the quantitative and behavioral measures of impulsivity; more specifically, there was a strong, positive correlation between thrill-seeking (a subset of the construct of impulsivity as measured by the YPI) and impulsivity as measured by the GoStop Impulsivity Paradigm, *r* = .59, *p* < .05, and, a strong, positive correlation between impulsivity (as measured by the YPI) and impulsivity as measured by the GoStop Impulsivity Paradigm, *r* = .49, *p* < .05 (see Table 4.22.). Additionally, for

participants in the low/high internalizing behaviors group, results showed that, there was a strong, positive correlation between impulsiveness (a subscale of the construct of impulsivity as measured by the YPI) and impulsivity as measured by the GoStop Impulsivity Paradigm, $r = .53$, $p < .05$ (see Table 4.23.).

Table 4.22. – Correlation Coefficients between the distinct measures of impulsivity for the participants from the externalizing behaviors group.

	Impulsive-Ness	Irresponsi-bility	Impulsivity	GoStop 50ms	GoStop 150ms	GoStop 250ms	GoStop 350ms	GoStop	TCIP
Thrill Seeking	**.52***	**.76****	**.90****	.18	.37	.38	.32	**.59***	-.01
Impulsiveness		.41	**.67****	.28	.41	.28	.17	.40	-.46
Irresponsibility			**.88****	-.24	.07	.09	.36	.14	.20
Impulsivity				.05	.40	.32	.36	**.49***	-.00
GoStop_50ms					.45	.18	-.17	**.57***	-.18
GoStop_150ms						**.65****	.17	**.75****	-.35
GoStop_250ms							**.57***	**.80****	-.26
GoStop_350ms								.44	.28
GoStop (Overall)									-.08

Note: * $p < .05$, ** $p < .01$

Table 4.23. – Correlation Coefficients between the distinct measures of impulsivity for the participants from the internalizing behaviors group.

	Impulsive-Ness	Irresponsi-bility	Impulsivity	GoStop 50ms	GoStop 150ms	GoStop 250ms	GoStop 350ms	GoStop	TCIP
Thrill Seeking	**.63****	**.64****	**.90****	.21	.20	.22	-.13	.22	.12
Impulsiveness		.26	**.68****	.46	.49*	.38	.23	**.53***	-.02
Irresponsibility			**.83****	-.22	-.04	.08	-.15	-.09	.05
Impulsivity				.10	.19	.21	-.09	.17	.06
GoStop_50ms					.58*	.40	.11	**.71****	-.10
GoStop_150ms						**.67****	.39	**.91****	.06
GoStop_250ms							.40	**.79****	.14
GoStop_350ms								**.56***	.01
GoStop (Overall)									.03

Note: * $p < .05$, ** $p < .01$

Correlations between YSR and CBCL

The relationship between parent reports of adolescents' externalizing and internalizing behaviors (measured through the CBCL) and the self-report measure of youth externalizing and internalizing behaviors was explored using Correlation analysis (Spearman's correlation coefficient). In regards to externalizing behaviors, there was a strong, positive correlation between self-reports and parent-reports, $r = .75$, $p < .0005$. In contrast, no correlation was found between self-report and parent-report measures of internalizing behaviors, $r = .41$, $p > .05$. This means that whereas for externalizing behaviors, parent-reports were strongly associated to self-reports, for internalizing behaviors the opposite effect was found; parent-reports of their child's experiences of internalizing symptoms were not associated to self-reports.

Overall findings: Data analyses differentiating between adolescents who display high versus low externalizing behaviors and adolescents who display high versus low internalizing behaviors in their levels of impulsivity found that adolescent participants did not differ in their levels of impulsivity in neither one of the behavioral measures employed. In regards to the externalizing behaviors subgroup, impulsivity did not differ between aggressive and delinquent adolescents and the control group. The same result was found between adolescents who display internalizing symptoms and the control group. Furthermore, the subgroups' were neither different in either one of the four areas of functioning associated with executive difficulties, namely, emotional and personality changes, motivational changes, behavioral changes, and cognitive changes.

4.2.5. Impulsivity, Parent Control and Parent-Adolescent Conflict, and Externalizing and Internalizing Behaviors – Moderation Analyses

Hypothesis five of the present research study states that the relationship between parent control, parent-adolescent conflict and adolescents' exhibition of externalizing and internalizing behaviors will be significantly moderated by the adolescents' psychopathic features. Thus, similar to the analyses conducted for the first phase of the study, the moderation role of impulsivity (as measured by the behavioral measures) was examined using the PROCESS macro for SPSS (Model 1; Hayes, 2013).

In regards to externalizing behaviors, results indicated that the relationship between father psychological control and externalizing behaviors was moderated by impulsivity (F (3, 14) = 9.48, $p \leq .05$), and the model accounted for 46% of the variance of externalizing behaviors. The moderation effect was stronger only for adolescents with high levels of impulsivity (beta = .55, $p < .05$) (see Figure 4.7.); that is, and as it can be seen from Figure 4.7., father psychological control is more strongly positively related to externalizing behaviors only for adolescents with high levels of impulsivity. Table 4.24. shows a summary of the moderation effect of impulsivity on the relationship between father psychological control and adolescent's externalizing behaviors.

As regards internalizing behaviors, results indicated that the relationship between mother-adolescent conflict and internalizing behaviors was moderated by the presence of impulsivity (F (3, 14) = 12.28, $p < .05$), and the model accounted for 50% of the variance of internalizing behaviors. More specifically, the moderation effect was stronger for adolescent girls with low proportion of response inhibition (thus higher levels of impulsivity) (beta = 2.51, $p < .005$) versus mean and high proportion of response inhibition (thus medium and low levels of impulsivity) (beta = 1.95, $p < .005$; beta = 1.39, $p < .005$, respectively; see Figure 4.8.). In other words, and as it can be

seen from Figure 4.8., when mother-adolescent conflict is low, experiences of internalizing symptoms were very similar for adolescents regardless of their level of impulsivity; nevertheless, when mother-adolescent conflict was high, internalizing behaviors were substantially higher in more impulsive adolescents. Table 4.25. shows a summary of the moderation effect of impulsivity on the relationship between mother-adolescent conflict and adolescent's internalizing behaviors. Additionally, father behavior control was significantly associated with internalizing behaviors in adolescents with low and mean proportion of response inhibition (thus higher and medium levels of impulsivity) (beta = 2.39, $p < .05$; beta = 1.01, $p < .05$, respectively), but not in adolescents with high proportion of response inhibition (thus lower levels of impulsivity, beta = -.36, $p > .05$; see Figure 4.9.), F (3, 14) = 5.23, $p < .05$, with the total variance explained by the model as a whole being 24%. What this means is that, behavior control was more strongly related to internalizing behaviors when adolescents had higher levels of impulsivity. Table 4.26. shows a summary of the moderation effect of impulsivity on the relationship between behavior control and adolescent's internalizing behaviors.

Overall findings: The results regarding the moderation role of impulsivity demonstrate that, indeed, the relationship between certain specific aspects of parenting and externalizing and internalizing behaviors is moderated by the presence of impulsivity. More specifically, impulsivity moderated the relationships between father psychological control and externalizing behaviors, mother-adolescent conflict and internalizing behaviors, and father behavior control and internalizing behaviors.

Table 4.24. Moderation analysis investigating the moderation effect of impulsivity on the relationship between parent control and externalizing behaviors.

	b	*SE B*	*t*	*p*
Constant	5.49 [2.16. 8.82]	1.55	3.54	*p* < .05
Impulsivity	.13 [-.09, .35]	.10	1.27	*p* > .05
F. Psych. Control	.22 [-.19, .63]	.19	1.16	*p* > .05
Impulsivity x F. Psych. Control	**.02 [.00, .05]**	**.01**	**2.13**	***p* < .05***

Note: * R^2 = .46

Table 4.25. Moderation analysis investigating the moderation effect of impulsivity on the relationship between parent-adolescent conflict and internalizing behaviors.

	b	*SE B*	*t*	*p*
Constant	23.91 [14.36. 33.47]	4.45	5.37	*p* < .05
Impulsivity	-32 [-.71, .09]	.18	-1.76	*p* > .05
M-A Conflict	1.95 [1.17, 2.73]	.36	5.39	*p* < .05
Impulsivity x M-A Conflict	**-.03 [-.05, -.01]**	**.01**	**-3.22**	***p* < .05***

Note: * R^2 = .50

Table 4.26. Moderation analysis investigating the moderation effect of impulsivity on the relationship between parent control and internalizing behaviors.

	b	*SE B*	*t*	*p*
Constant	20.47 [9.21. 31.73]	5.25	3.90	$p < .05$
Impulsivity	.11 [-.08, .29]	.09	1.21	$p > .05$
F. Behav. Control	1.01 [.15, 1.88]	.40	2.51	$p < .05$
Impulsivity x F. Behav. Control	**-.03 [-.05, -.01]**	**.01**	**2.68**	***p* < .05***

Note: * $R^2 = .24$

Figure 4.7. Simple slopes of the association between father psychological control and externalizing behaviors, for adolescents at high levels of impulsivity.

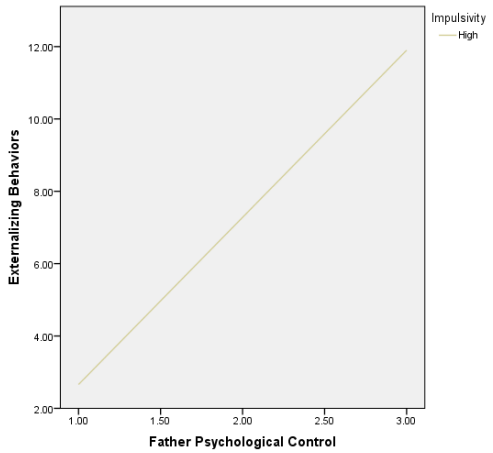


Figure 4.8. Simple slopes of the association between mother-adolescent conflict and internalizing behaviors, for adolescents at low, mean, and high levels of impulsivity.

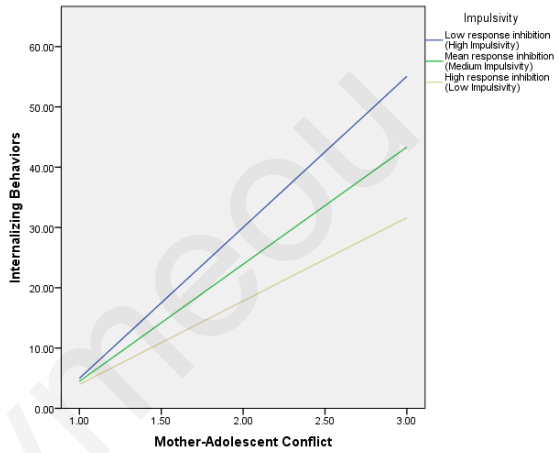
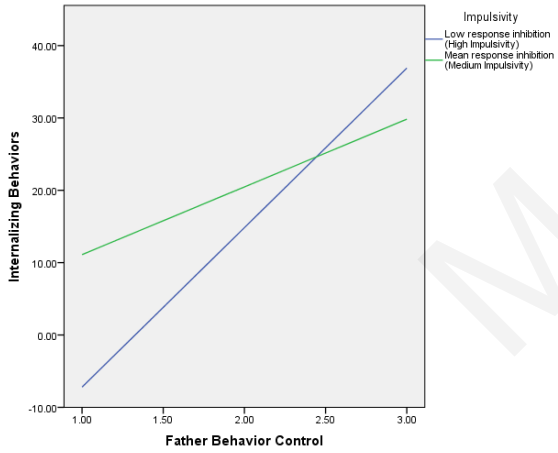


Figure 4.9. Simple slopes of the association between father behavior control and internalizing behaviors, for adolescents at mean, and high levels of impulsivity.



4.2.6. Summary of findings from Phase II

Similar to the results from the first phase of the study, results of the second phase of the study showed that the relationship between aspects of parenting and externalizing and internalizing behaviors was moderated by impulsivity. More specifically:

❖ Impulsivity moderated the relationship between father psychological control and externalizing behaviors. Use of father psychological control was more strongly related to externalizing behaviors only when adolescents were highly impulsive.

❖ Impulsivity also moderated the relationship between mother-adolescent conflict and internalizing behaviors. When mother-adolescent conflict was low, experiences of internalizing behaviors were similar for adolescents irrelevant of their levels of impulsivity. Nonetheless, when mother-adolescent conflict was high, internalizing behaviors were substantially more evident in more impulsive adolescents than adolescents with mean or low levels of impulsivity.

❖ The relationship between father behavior control and internalizing behaviors was also moderated by impulsivity; that is, the relationship between father behavior control and internalizing behaviors was significantly stronger for adolescents with high levels impulsivity.

5. CHAPTER 5 – DISCUSSION

The present study aimed at expanding on previous research by investigating the direct and indirect paths through which parental and personal factors associate with adolescents' exhibition of externalizing and internalizing behaviors. More specifically, the research questions designed for the present study aimed to provide an understanding of how a series of hypothesized parental factors may influence the development of externalizing and internalizing behaviors. The three parental factors of interest were the parental control (= behavioral control, and psychological control), and parent-adolescent conflict. Additionally, as it is acknowledged that certain associations may be stronger for some children, the second purpose of the study was to explore the way that adolescents' psychopathic traits moderate the relationship between parental control and parent-adolescent conflict, and the development of externalizing and internalizing behaviors. The three psychopathic traits of interest that served as moderators in the analysis were the callous-unemotional (C-U) traits, narcissism, and impulsivity. The study was completed in two-phases; in the first phase of the study, data from adolescents and their fathers and mothers was gathered, and for the second – quasi-experimental – phase of the study, a stratified sampling of two groups of adolescent participants was used, to explore in greater detail the role of impulsivity, through behavioral measures.

The analyses yielded mixed findings. Consistent with the formulated hypotheses, it was found that specific parental factors (= psychological control, parent-adolescent conflict) and psychopathic traits (= impulsivity) were associated with adolescents' exhibition of externalizing and internalizing behaviors. Furthermore, C-U traits, narcissism, and impulsivity, were found to moderate the relationship between some aspects of parental factors and externalizing and internalizing behaviors. And lastly, one

other important finding was that both parents were found to be important for the behavioral and psychosocial well-being of their adolescent children.

The following sections of the present chapter will present a synopsis and review of the findings, as well as, a discussion of the relative contribution of the findings to both theory and practice. Finally, limitations of the study will be addressed towards the end of the chapter, followed by recommendations for further research.

5.1. Parental child-rearing practices and externalizing and internalizing behaviors

The first hypothesis of the present research study stated that parental control will be associated to adolescents' exhibition of externalizing and internalizing behaviors. More specifically, it was hypothesized that behavioral control will negatively predict both externalizing and internalizing behaviors, and psychological control will positively predict externalizing and internalizing behaviors. This hypothesis was partially supported. The results showed that both mother psychological control and father psychological control positively predict externalizing and internalizing behaviors. This finding is in accordance to previous studies (e.g., Barber, 1996; Hoeve et al., 2009; Mills & Rubin, 1998; Pettit et al., 2001; Plunkett et al., 2007; Rogers et al., 2003). The positive association between psychological control and internalizing behaviors comes to no surprise as psychological control has been traditionally associated to internalizing symptomatology, such as depression, low self-confidence, and low self-esteem (Pettit et al., 2001; Plunkett et al., 2007; Rogers et al., 2003; Wei & Kendall, 2014). Given that adolescence is a period of increased striving and need for autonomy and independence, adolescents who experience psychological control may see their parents as being non-responsive and to undermine their emotional and psychological needs, and, thus preventing the adolescents from trusting their own abilities, uniqueness, and ideas (Barber, 1996). As a

result, such a non-responsive environment makes it difficult for a child to develop a positive self-perception for various reasons, such as the implied derogation of the child, the limited opportunities to develop a sense of personal efficacy, and, particularly for adolescents, interference with the exploration needed to establish a stable identity (cited in Barber, 1996). Even though parental use of psychological control accounted for only 2.2% to 4.4% of the variance in internalizing behaviors, these figures are similar to previous research with pre-adolescent and young adolescent children (e.g., Finkenauer, Engels, & Baumeister, 2005; Galambos et al., 2003; Pettit et al., 2001). In their study, Pettit et al. (2001) found that mother psychological control accounted for only 3% of the variance in adolescents' anxiety symptoms. The small portions of variance accounted for in mothers' and fathers' psychological control suggest that it might be fruitful to consider a broader array of parenting predictors.

One other important finding was the positive association between parental psychological control and externalizing behaviors. Even though externalizing symptomatology traditionally has more prominent empirical associations to behavioral control, some researchers also support the linkage between psychological control and externalizing behaviors (e.g., Barber, 1996; Mills & Rubin, 1998; Rogers et al., 2003; Hoeve et al., 2009), and the present study provides further support of this proposition. Psychological control accounted for only 8.3% to 13.1% of the variance in externalizing behaviors. Despite the small portions of variance accounted for in mothers' and fathers' psychological control tactics, these figures are similar to previous research using pre-adolescent and young adolescent samples (e.g., Finkenauer et al., 2005; Hoeve et al., 2009). Nevertheless, in their study of young adolescent children (mean age = 11.5 years), Galambos and colleagues (2003) reported quite dissimilar findings; the researchers found that psychological control accounted for less than 1% of the variance

in trajectories of externalizing behaviors; similarly, Pettit et al. (2001) concluded that psychological control did not account for any unique variance in delinquent behavior. Even though previous research has produced mixed and inconclusive findings, the results of the present study suggest a positive link between psychological control tactics and the exhibition of delinquent and aggressive behaviors. One explanation for this association may be that the punitive discipline associated with childhood and adolescent aggression often involves verbal hostility such as blaming, deprecation, and derogation. Consequently, such psychological control tactics may, on the one hand, diminish the positive self-perception of the adolescent, but may also lead to aggression by arousing anger (Mills & Rubin, 1998). Nevertheless, in light of the small percentage of the variance in explaining externalizing behaviors, the relative importance of other parenting predictors in explaining such behavior difficulties should also be considered.

In regards to behavioral control, it is argued that under-controlled environments do not foster self-control in children, often leaving them more negligent and more willing to violate social rules (Barber, 1996), thus displaying more externalizing behaviors than their counterparts whose parents practice behavioral control tactics. Therefore, it was an unexpected finding of the present study to not find a predictive relationship between behavioral control and either externalizing or internalizing behaviors. This unforeseen finding contradicts previous research, wherein behavioral control has been linked with externalizing behaviors, such as substance use, antisocial behavior, delinquency, and sexual precocity (Barber, 1996; Barber et al., 1994; Galambos, et al., 2003; Mills & Rubin, 1998; Pettit et al., 2001), and with internalizing behaviors (Mills & Rubin, 1998; Wei & Kendall, 2014).

Why is it that behavioral control – a practice systematically found to be positively related to behavior difficulties, lacked predictive power, whereas psychological control

was predictive in the exhibition of both externalizing and internalizing behaviors? Could the adolescent's age play a role in the findings? In regards to psychological control, it is not surprising that a predictive association between psychological control and externalizing and internalizing behaviors was found. As the adolescents in the present study were in their mid-to-late adolescent years and adolescence is known to be a period in life wherein the youth strive for increased autonomy and independence, as such, it was not unorthodox that such parental psychological control tactics that undermine the adolescent's emotional and psychological needs would be found to be associated with behavior difficulties. Regarding behavioral control though, the results were undoubtedly unexpected. Nevertheless, they might not be as surprising if the adolescents' age group is taken into consideration. The majority of research that has established a predictive relationship between behavioral control and externalizing or internalizing behaviors was conducted with children, pre-adolescents, or younger adolescents (e.g., 12-14 year-olds; Barber, 1996; Barber et al., 1994; Galambos, et al., 2003; Mills & Rubin, 1998; Pettit et al., 2001). Within those age-groups, limit-setting and behavior monitoring are critical in enabling adolescents to learn that social interactions are governed by conventions that must be adhered to in order to become competent members of society (Barber et al., 1994). To this end, it was reasonable for predictive associations to be found in previous research. The youth that participated in the present study though, were in their mid-to-late adolescent years, and, according to researchers, there is a significant decline in limit-setting and monitoring across adolescence (Barber et al., 2005; Laird, Pettit, Bates, & Dodge, 2003). As Barber and his colleagues argue, this decline is sensible; parents begin to reduce, or at least alter, some of the specific limits they set as they attempt to grant legitimate autonomy to their adolescents (cited in Barber et al., 2005). Within this age-group, we would, logically, expect behavioral

control employed by parents in previous years to have influenced to a great extent the adolescents' choices and actions at present time. For that reason, it is not that behavioral control is not important in determining adolescents' behavioral and psychosocial adjustment; in contrast, it could be that behavioral control may *no longer* be important, as we would expect mid-to-late adolescents (who are close to reaching adulthood), to – by now – know which places to visit, peers to socialize with, and in general, which behaviors are acceptable and so can be exhibited, or unacceptable and so should be avoided. Nevertheless, to draw any meaningful conclusions about such a proposition requires further, longitudinal research.

All in all, the findings suggest that psychological control is important in determining youths' exhibition of externalizing and internalizing behaviors. It seems that adolescence is a crucial period in life to feel autonomous, self-sufficient, and independent, and so, any tactics that go against those needs are to corrode self-perception and influence inward and outward behaviors negatively.

5.2. Parent-adolescent relationship and externalizing and internalizing behaviors

The second hypothesis of the study, which stated that parent-adolescent conflict will be related to adolescents' exhibition of externalizing and internalizing behaviors, was fully supported by the results. Firstly, it was found that parent-adolescent conflict positively predicts adolescents' externalizing behaviors. In other words, the results demonstrate that higher parent-adolescent conflict predicts greater exhibition of negative outward behavior, such as aggressiveness and delinquent acts. This finding goes in line with previous research whose conclusions mirror the conclusions of the present study; more specifically, previous research have also documented the positive relationship between parent-child conflict and externalizing symptomatology (e.g., Buehler, 2006;

Eichelsheim et al., 2010; Galambos et al., 1995; Marmorstein & Iacono, 2004; Zadeh et al., 2010). It seems that the negative and coercive interaction patterns in the parent-adolescent relationship spills over directly into adolescent interpersonal aggression. Secondly, it was also found that parent-adolescent conflict is also important in predicting internalizing symptomatology. Previous research have provided inconclusive findings in regards to this relationship; on the one hand, studies have reported that parent-adolescent conflict is associated with high levels of parent-adolescent conflict (e.g., Marmorstein & Iacono, 2004; Shek, 1998), with one study even reporting that father-adolescent conflict exerted a stronger influence on adolescent well-being than mother-adolescent conflict (Shek, 1998). In contrast to this, however, are reports that this negative parent-adolescent relationship is not associated with youth internalizing problems (Buehler, 2006). The results of this study are consistent, and provide support, to the former argument – it was found that the more negative the parent-adolescent dyadic relationship was characterized to be, the more internalized symptoms the adolescents presented. One explanation for this association, as proposed by Shagle and Barber (1993), is that the critical aspect of hostility might corrode self-esteem and, thus, contribute to internalizing symptoms, such as depression and anxiety.

One other important finding was that, similar to psychological control, fathers were also important to adolescents' behavioral and psychosocial well-being. Even though, traditionally, the principal focus of the majority of research on parent-child relationship has been on mothers (Williams & Kelly, 2005), the results of this study further support the notion of significance of the father-figure for adolescent adjustment.

Overall, these findings are supportive of the view that both a positive mother-child relationship and a positive father-child relationship are imperative; it seems that the relationship established forms a foundation for future behaviors. Conflict, a parenting

domain that reflects important aspects of the parent-adolescent relationship was found to be an important aspect of adolescents' socialization, as it was found to be a predictor of adolescent externalizing and internalizing symptomatology.

5.3. Psychopathic traits and externalizing and internalizing behaviors

The third hypothesis of the study was partially supported by the results. The hypothesis stated that psychopathic features of adolescents such as C-U traits, narcissism, and impulsivity will significantly predict externalizing behaviors. In agreement with earlier research (e.g., Carrasco et al., 2006; Neumann et al., 2010), the results showed that only impulsivity was important in the prediction of externalizing behaviors. That is, higher levels of impulsivity were positively associated to the exhibition of externalizing behaviors. This finding was expected; as Ramírez and Andreu (2006) argue, impulsivity is part of a system involved in controlling impulses that lead to being "civilized". In other words, to be considered as competent and civilized members of society, people are expected to behave within socially defined behavioral limits. As "undercontrolled" behavior (i.e., impulsivity) refers to a spontaneous emotional state that goes beyond one's control, it is not surprising then, that people who exhibit externalizing behaviors (e.g., delinquency) have high levels of impulsivity (cited in Ramírez & Andreu, 2006). In contrast, the study did not find a predictive power of neither C-U traits nor narcissism in predicting externalizing behaviors. The lack of a predictive relationship between narcissism and externalizing behaviors contradicts previous findings (e.g., Ha et al., 2008; Kerig & Stellwagen, 2010; Kerr et al., 2012; Marsee et al., 2005; Washburn et al., 2004) that established an association between this facet of psychopathic traits and externalizing symptomatology. Furthermore, this finding also contradicts the threatened egotism theory (Baumeister et al., 1996) which proposes that violent behavior is related

to a greatly favorable view of the self, combined with an ego threat. Likewise, the lack of a relationship between C-U traits and behavior difficulties is also surprising, as it contradicts previous research (e.g., Essau et al., 2006; Frick & Dickens, 2006; Frick & White, 2008) which has consistently reported a relationship between the two factors. What's more surprising is that, traditionally, the callous–unemotional dimension seemed to be the most important dimension of psychopathy for predicting externalizing behaviors. Nevertheless, similar to the present findings, a number of studies have concluded that, violent behavior is explained primarily by behavioral psychopathic symptoms (e.g., impulsivity), rather than interpersonal (e.g., narcissism) or affective traits (e.g., callous-unemotionality) (Corrado, Vincent, Hart, & Cohen, 2004; Frick, Bodin, & Barry, 2000). In support of these findings, it has been argued that C-U traits *are*, indeed, more important for designating a more severe (Christian, Frick, Hill, Tyler, & Frazer, 1997) and stable (Frick et al., 2005) pattern of antisocial behavior, but do so *within* children who show serious conduct problems (Frick & White, 2008; Marsee et al., 2005). To this end, the findings of the present study wherein only impulsivity was predictive of externalizing behaviors are plausible.

All in all, the present findings challenge the notion that, when compared to other dimensions of psychopathy, it is the callous-unemotional dimension that seems to be the most critical for predicting externalizing behaviors, thus supporting the need of consideration of impulsivity as a relatively more significant predictor of aggressive and delinquent behaviors.

The fourth hypothesis of the study, which stated that psychopathic traits such as C-U traits, narcissism, and impulsivity will be related to adolescents' exhibition of internalizing behaviors, was not supported. In other words, neither C-U traits, narcissism, or impulsivity were found to be predictive of internalizing symptoms.

Although a predictive relationship was hypothesized, findings are not surprising. In studying C-U traits, research has consistently focused to a much greater degree in the association between the callous-unemotional dimension and the exhibition of externalizing symptoms, thus leaving the question of a possible association between C-U traits and internalizing symptoms unanswered. Essau and her colleagues (2006) did provide some support that the callousness trait was modestly correlated with the internalizing composite of the Youth Self-Report (YSR; Achenbach, 1991) (Essau et al., 2006), but other than that, to my knowledge, there is no other research linking C-U traits and internalizing behaviors. The reason for the lack of a predictive relationship may relate to the characteristics of the callous-unemotional person. For example, the characteristics of callous-unemotionality include absence of guilt, constricted display of emotion, failure to show empathy, and callous use of others for one's own gain (Fanti et al., 2009; Frick & White, 2008), and so, it seems reasonable to assume that C-U traits and internalizing behaviors are not related.

Additionally, and contrary to the hypothesis of the study that narcissism will positively predict internalizing behaviors, the findings did not support the hypothesized predictive association between narcissism and internalizing symptomatology. As narcissism refers to a "pervasive pattern of grandiosity" that is characterized by arrogant behaviors, feelings of entitlement and superiority (cited in Horton et al., 2006), the findings were not highly unexpected. One explanation for this may be that this propensity to engage in self-enhancement is inconsistent with feelings of anxiety (cited in Barry & Malkin, 2010). The fact that empirical evidence of internalizing problems as associated features of narcissism has received minimal attention and the evidence that does exist is mixed makes it difficult to draw meaningful conclusions. The results of the present study clearly oppose previous results; for example, Washburn et al. (2004)

reported a positive association between narcissistic exhibition and internalizing symptoms in pre-adolescent and adolescent samples. Likewise, Barry and Malkin (2010) concluded that some forms of narcissism correspond to feelings of depression and anxiety in adolescents.

Finally, there was no predictive association between impulsivity and internalizing behaviors. Even though a positive relationship between impulsivity and internalizing symptomatology was assumed, our data does not confirm this hypothesis. The findings contradict previous research which found that depressed children and adolescents were rated by their parents as being significantly more impulsive than controls (Cataldo et al., 2005). As there are only but a few references in the literature relating impulsivity and internalizing psychopathology (Cosi et al., 2011; Costello et al., 2004), the results of the present study should be considered as providing further understanding of the role of this personality trait in experiences of internalizing symptoms.

5.4. The moderating role of psychopathic traits in the relationship between parent control, parent-adolescent conflict, and externalizing and internalizing behaviors

The fifth hypothesis of the present research study stated that the relationship between parent control, parent-adolescent conflict and adolescents' exhibition of externalizing and internalizing behaviors will be significantly moderated by the adolescents' psychopathic features. More specifically, it was hypothesized that the association between negative parenting practices, such as low behavior control and high psychological control, and externalizing and internalizing behaviors will be significantly stronger for adolescents with C-U traits, narcissism, and impulsivity, and that, the association between parent-adolescent conflict and externalizing and internalizing behaviors will be, again, significantly stronger for adolescents with C-U traits,

narcissism, and impulsivity. Results from the first and second phase of the study provide partial support of these hypotheses.

In relation to the moderation role of C-U traits, it was found that indeed, consistent with the formulated hypothesis, C-U traits did moderate the relationship between parent-practices, parent-adolescent conflict, and externalizing and internalizing behaviors. Nevertheless, distinct moderation effects were found for boys and girls. For adolescent boys, it was found that C-U traits moderated the relationship between father-adolescent conflict and externalizing behaviors, and that this effect was substantially stronger for adolescent boys with high C-U traits versus medium and low C-U traits. In other words, and as it can be seen from Figure 4.2., when father-adolescent conflict is low, the exhibition of externalizing behaviors are rather similar for adolescents regardless of the presence of C-U traits; nevertheless, when father-adolescent conflict is high, externalizing behaviors are more evident in adolescents with higher C-U traits than in adolescents with low C-U traits. For adolescent girls, a number of moderator effects were found; firstly, the same moderation effect as with adolescent boys was found; in other words, the relationship between father-adolescent conflict and externalizing behaviors was moderated by the presence of C-U traits, *but*, the moderation effect was slightly stronger for adolescent girls with low C-U traits versus medium and high C-U traits. When father-adolescent conflict is low, girls with low C-U traits exhibit less behavior difficulties than girls with medium or high C-U traits; nevertheless, as father-adolescent conflict increases, it is girls with low C-U traits that exhibit more externalizing behaviors. One possible explanation for this difference may relate to the dynamics of the parent-adolescent relationship between boys and girls. Furthermore, apart from externalizing behaviors, C-U traits were found to moderate the relationship between father-adolescent conflict and internalizing behaviors, and this moderating effect was

somewhat stronger for girls with high C-U traits versus medium and low C-U traits. When father-adolescent conflict is low, the exhibition of internalizing behaviors are relatively similar for girls regardless of the presence of C-U traits; nevertheless, when father-adolescent conflict is high, internalizing behaviors are more evident in girls with higher C-U traits than in those with medium or low C-U traits. Lastly, C-U traits also moderated the relationship between mother psychological control and externalizing behaviors, with the moderation effect being stronger for adolescent girls with low C-U traits rather than for girls with medium or high C-U traits. When mothers' use of psychological control was low, girls with low C-U traits exhibited less externalizing behaviors and girls with high C-U traits exhibited more externalizing behaviors; nonetheless, as mother psychological control increased, it was girls with low C-U traits that exhibited more externalizing behaviors. It seems that for girls who do not display the characteristics of C-U traits, such as superficial charm and lack of guilt and empathy, the relationship between psychological control and externalizing behaviors is stronger. These findings support the proposition that the association between ineffective parenting and the exhibition of externalizing and internalizing behaviors is truer for some youths than others. Similar to the results of the present study, previous research also reported the moderation role of C-U traits in the relationship between parenting and behavior difficulties; for example, in one study, researchers concluded stronger associations between ineffective parenting practices and externalizing behaviors in children with low C-U traits compared with high C-U children (Pasalich et al., 2011). Additionally, Kroneman et al. (2011) found that low levels of parental warmth were more strongly associated to Oppositional Defiant Disorder/Conduct Disorder (ODD/CD) symptoms in girls with high versus low levels of C-U features. Accordingly, the findings of the present study provide additional support to the already established moderation

role of C-U traits in the relationship between negative parenting and the exhibition of externalizing and/or internalizing behaviors.

In relation to the moderation role of narcissism, analyses of the data found that the relationship between father psychological control and internalizing behaviors in girls was moderated by narcissism, with this moderating effect being stronger only for girls with medium and high levels of narcissism. When father psychological control is low, the exhibition of internalizing behaviors is relatively less for girls with high levels of narcissism; *however*, when father psychological control increases, they exhibit more internalizing symptomatology than girls with mean levels of narcissism. This result of a relationship between psychological control and internalizing behaviors being stronger for girls with high levels of narcissism is reasonable. Psychological control has been linked with internalizing behaviors, and one explanation one might give would be that adolescents who experience psychological control may see their parents as being non-responsive to their emotional and psychological needs. This makes it difficult for an adolescent to develop positive self-perception for numerous reasons, such as the implied derogation and devaluation of the adolescent; to this end, it is expectable that such an association would be even stronger for adolescents with high narcissism who are characterized by feelings of arrogance and superiority. Even though the data analysis yielded only one moderation effect, it was nevertheless an important finding, as, to my knowledge, the moderation effect of narcissism when studying the association of parenting and behavior difficulties has not been previously investigated. One study that did investigate the moderator effects of psychopathic features in the relationship between parent rearing practices and adolescent antisocial behavior, concluded that harsh and inconsistent discipline was predictive of adolescent conduct problems only for those high in interpersonal features of psychopathy (Edens et al., 2008). To this end,

the finding of the present study that narcissism moderates the relationship between negative parenting practices and internalizing behaviors further supports the proposition that these associations are stronger in some youth than others.

Finally, in relation to the moderation role of impulsivity, a number of moderator effects were found, both for externalizing and internalizing behaviors. As regards externalizing behaviors, it was found that, for boys, the relationship between mother-adolescent conflict and externalizing behaviors was moderated by the presence of impulsivity, and this moderation effect was stronger for adolescent boys with high levels of impulsivity versus medium and low levels of impulsivity. Both when mother-adolescent conflict was low and high, more impulsive adolescents exhibited more aggressive and delinquent behaviors. Additionally, the moderation role of impulsivity in the relationship between father psychological control and externalizing behaviors was also found, but this effect was strong only for adolescents with high levels of impulsivity. It seems that children who are more impulsive are more susceptible to the effects of negative parental practices or negative parent-adolescent relationship, and similar findings have been demonstrated in previous studies as well (e.g., Lengua et al., 2000; Leve et al., 2005). For example, Leve et al. (2005) found harsh parental discipline to predict externalizing behavior in girls only when accompanied by an individual vulnerability (e.g. high impulsivity). Additionally, moderation effects were also found in regards to internalizing symptoms. Firstly, the relationship between mother-adolescent conflict and internalizing behaviors was moderated by the presence of impulsivity; when mother-adolescent conflict was low, the exhibition of internalizing symptoms were very similar for adolescents regardless of their level of impulsivity; nevertheless, when mother-adolescent conflict was high, internalizing behaviors were substantially higher in more impulsive adolescents. Furthermore, impulsivity moderated the relationship

between father behavior control and internalizing behaviors, and this moderation effect was strong only in adolescents with medium and high levels of impulsivity. Although there is not much research examining the moderation role of impulsivity in the prediction of internalizing symptomatology, a study by Lengua et al. (2000) found that inconsistent discipline was more strongly related to depression in children high in impulsivity. One explanation for this relationship may be that children high in impulsivity are more vulnerable to the effects of parental inconsistency in parental control tactics (e.g., setting limits) because, compared with less impulsive children, they experience difficulties in regulating their emotions and behaviors on their own. For that reason, without parental control, impulsive children may be more susceptible in experiencing negative interactions with other people, such as parents and peers, which, in turn, may result in low self-esteem, social withdrawal, and depression (Lengua et al., 2010).

On the whole, the results of the present study provide support that specific personal traits influence the degree to which adolescents are responsive to parents' socialization efforts. The findings suggest that, adolescents' psychopathic traits, such as C-U traits, narcissism, and impulsivity all moderate the relationship between specific parent rearing practices, parent-adolescent conflict, and externalizing and internalizing behaviors.

5.5. Parental importance for adolescents' behavioral and psychosocial well-being

The sixth and final hypothesis of the study stated that, when considering both maternal and paternal significance for the development of adolescents' externalizing and/or internalizing difficulties, both parents will play a vital role for the adolescents' behavioral and psychosocial well-being. Inclusion of the father figure in research is crucial; firstly, in the past decades, the amount of time that fathers dedicate to their children has increased considerably, and so, including fathers in parenting research should be

encouraged and supported. Nonetheless, past research has underestimated the role of fathers in the study of childrens' and adolescents' development, even though the few studies that did investigate the role of the father have concluded that paternal behaviors are very significant for their offspring's adjustment (e.g. Buist et al., 2004; Flouri & Buchanan, 2002, 2003; Gryczkowski et al., 2010). Indeed, in a recent meta-analysis, it was concluded that fewer than 20% of the studies focused on the parenting behavior of fathers, even though the effect of specific paternal parenting behaviors was larger than maternal parenting behaviors (Hoeve et al., 2009).

The results of the present study support the formulated hypothesis. Both parents were important in determining the degree to which their adolescent children would display either externalizing and/or internalizing behaviors.

Regarding parental control and the combined scores for externalizing behaviors, the findings of the present study suggest that both mother psychological control and father psychological control were important in predicting externalizing behaviors. For the combined scores for internalizing behaviors though, only father psychological control was positively associated to internalizing symptomatology; in other words, high father psychological control was predictive of greater exhibition of internalizing symptoms, such as withdrawn behaviors, somatic problems, and/or anxious/depressed symptoms.

The relative importance of both the mother figure and the father figure for adolescents' behavioral and psychosocial well-being was also supported in the analyses of parent-adolescent relationship and externalizing and internalizing behaviors. Both mother-adolescent conflict and father-adolescent conflict were found to be predictive of externalizing behaviors. Likewise, similar findings were obtained in regards to internalizing behaviors. In other words, externalizing behaviors, such as aggressive and delinquent behaviors, and internalizing behaviors, such as withdrawn

behaviors and anxious/depressed symptoms were more evident in adolescents whose relationship with their parents was characterized by negativity and hostility. This finding goes in line with the findings reported by Marmorstein and Iacono (2004); the researchers, who investigated adolescents and both their parents, found that both externalizing behaviors (e.g., conduct disorder) and internalizing behaviors (e.g., depression) were associated with high levels of conflict with both parents.

As a whole, the results of the present study further support the inclusion of both parents in future research. Due to the fact that fathers, in recent years, dedicate an increasing amount of time to their children than in the past, is one important reason why they should not be underrepresented in research as was the case in the past decades. Even though mothers are traditionally considered as the primary caregivers of their children (Bowlby, 1973), both parents are now more increasingly involved in the raising of their children, using child-rearing practices and building relationships with them; thus, it is, therefore, critical to consider how those processes from both parents influence the behavioral and psychosocial development of their adolescent children.

5.6. Differences between subgroups

Differences between different groups were also examined. Analyses yielded important findings in relation to different subgroups (male/female adolescents, high/low externalizing behaviors, high/low internalizing behaviors, and fathers/mothers) which will be summarized as follow.

5.6.1. Differences based on type of school

Two categories of schools were included in the analyses investigating differences in experiences of externalizing and internalizing behaviors. Category one combines the

data from the public urban schools and the private school, whereas category two combines the data from the public rural school and the technical school. The inclusion of each type of school in either one of the two categories was based on the socioeconomic status (SES) of the community that each school serves. For example, past research (e.g., McCracken & Barcinas, 1991) has indicated that SES is much lower for families of students attending public schools in rural areas than for families of students attending public urban schools.

Analyses of data did not find any differences in the exhibition of externalizing or internalizing behaviors based on the type of schools. Consequently, the prevalence and experiences of externalizing and internalizing behaviors in adolescents is similar across the different types of schooling. Despite the fact that these findings contradict previous research (e.g., Hope & Bierman, 1998), the fact that the vast majority of the schools were public urban schools and only one public rural school, one private school, and one technical school were used to gather data limits the generalizability of these findings. To further examine differences in the exhibition of externalizing and internalizing behaviors based on the type of schooling, data should be gathered from a larger number of schools, both from the public and private sectors.

5.6.2. Differences between male and female adolescents

Data analyses differentiating between male and female adolescent participants did generate important findings, both in relation to adolescents' psychopathic traits *and* adolescents' exhibition of externalizing and internalizing behaviors.

In relation to psychopathic traits, in general, males score higher on measures of psychopathy than females (Hicks et al., 2012; Verona, Sprague, & Javdani, 2012) both in forensic settings as well as the general population (Grann, 2000). However, among

the existing literature, to my knowledge, there is limited research examining gender differences across the three psychopathy dimensions; affective, interpersonal, and behavioral dimensions. The present study addresses this limitation. From the analyses, it was found that, similar to past research (e.g., Hicks et al., 2012; Verona, Sprague, & Javdani, 2012), boys and girls do differ in the presence of psychopathic traits, with boys scoring higher than girls in all three dimensions of psychopathy.

In relation to externalizing and internalizing behaviors, both mother and father accounts were taken into consideration. Results indicated that boys and girls did not differ in their exhibition of aggressive and delinquent behaviors. Although boys did exhibit more externalizing behaviors than girls, this difference was minimal and not statistically significant. This finding contradicts to some degree the traditional viewpoint that males display more aggressive and delinquent behaviors than females; however, it should be noted that, gender differences were examined in regards to the construct of externalizing behaviors as a whole instead of examining separately gender differences in the subscales that form the construct of externalizing behaviors and that, even so, male adolescents did exhibit somewhat more aggressive and delinquent behaviors than female adolescents. To further examine gender differences in the expression of externalizing behaviors, the different syndrome scales that group into the construct of externalizing behaviors should be investigated distinctively. On the other hand, gender differences were noted in regards to internalizing behaviors; with girls displaying more internalizing symptoms than boys. This finding is not surprising as traditionally, females are assumed to be more prone to inward behavior problems such as anxiety and depression (Galambos, Leadbeater, & Barker, 2004)

5.6.3. Differences between adolescents in the low/high externalizing behaviors group

Data analyses differentiating between adolescents in the low/high externalizing behaviors group generated important but mixed findings, both in relation to adolescents' psychopathic traits *and* adolescents' dysexecutive symptoms.

In relation to psychopathic traits, analyses were conducted both for the quantitative measures and the behavioral measures. Adolescents in the high externalizing behaviors subgroup scored considerably higher in the callous-unemotional dimension than the adolescents in the low externalizing behaviors subgroup. Therefore, adolescents who were reported as expressing more aggressive and delinquent behaviors demonstrated to a much greater degree the characteristics of the callous-unemotional dimension, such as more superficial charm and lack of guilt and empathy. Similarly, a significant difference was also found between the two subgroups in regards to narcissism, with the subgroup that exhibited more externalizing behaviors scoring substantially higher in the grandiose-manipulative dimension than the low externalizing behaviors subgroup; in other words, adolescents who were described by their parents as more aggressive and delinquent displayed more the narcissistic features of psychopathy (e.g., arrogant behaviors, feelings of entitlement and superiority, and a lack of empathy for or concern about others). Finally, there were also differences in levels of impulsivity between the two subgroups, with adolescents low in externalizing behaviors being noticeably less impulsive than adolescents high in externalizing behaviors. Additionally, as impulsivity was the trait explored in more detail in the second phase of the study, differences between the low/high group in regards to the three subscales of the construct of impulsivity – thrill-seeking, irresponsibility, and impulsiveness – were also investigated, and the results indicated that there was a difference between the two subgroups in all test measures. More specifically, and similar to the results obtained regarding the

constructs of C-U traits, narcissism, and impulsivity, adolescents in the high externalizing behaviors subgroup were characterized by more thrill-seeking, irresponsible, and impulsive behaviors than adolescents in the low externalizing behaviors subgroup. Despite the differences found between the two groups in impulsivity in the first phase of the study, quite dissimilar findings were obtained when analyzing group differences in the performance of the participants in the behavioral measures of impulsivity from the second phase of the study. The first behavioral measure of impulsivity employed was the GoStop Impulsivity Paradigm, a stop-task requiring responses to target stimuli and inhibiting responses when the target is unpredictably coupled with a stop signal at one of four stop delays (50,150, 250, and 350 ms). During the task, participants are instructed to respond while a number is still on the monitor, but to withhold responding if that number turns red (the stop signal). The proportion of responses to stop trials is interpreted as impulsive responding. Even though it was assumed that adolescents who exhibit more externalizing behaviors would experience greater difficulty in inhibiting their responses to stop trials than the control group, the two groups of adolescent participants did not differ in their levels of impulsivity in neither one of the four stop delays; what this means is that the proportion of responses to stop trials were not significantly different between aggressive and delinquent adolescents and the control group. This was an unexpected finding as the task has been found to effectively differentiate between different groups (Billieux et al., 2012; Ledgerwood et al., 2009). The second behavioral measure of impulsivity employed was the Two Choice Impulsivity Paradigm (TCIP), a choice procedure, for assessing tolerance for delayed rewards. In the procedure, participants experience a series of trials in which they must press a button to select one of two shapes that appear on a monitor, with each shape choice associated with a different delay–reward

contingency (a smaller reward/shorter delay shape, and a larger reward/longer delay shape). A preference for smaller-sooner choices rather than larger-later choices is interpreted as an indicator of greater impulsivity (Dougherty et al., 2005a). It was assumed that the high externalizing behaviors subgroup would be different than the low externalizing behaviors subgroup in that they would demonstrate greater preference for smaller-sooner choices; nevertheless, similar to the GoStop Impulsivity Paradigm, the two groups of participants did not differ in their levels of impulsivity; in other words, the preference for smaller-sooner choices was not greater in the high externalizing behaviors subgroup as it was assumed. This finding was also surprising as the TCIP has been found to effectively differentiate between different groups (Mathias et al., 2011). Accordingly, it is evident that there is inconsistency in the findings from the two phases of the study, something that is not uncommon in studies which employ both quantitative and laboratory measures (Gioia, Isquith, & Kenealy, 2008). Even though very few studies have assessed measures from multiple domains in the same participants (cited in Meda et al., 2009), only minimal correlations between self-reports and laboratory-based measures were reported (Reynolds, Ortengren, Richards, & de Wit, 2006); to this end, the researchers concluded that self-reports and behavioral measures probably measure different impulsivity domains (Reynolds et al., 2006). Parallel to this, a distinction is now being made between the cognitive aspects and affective aspects of impulsivity. More specifically, laboratory measures may be tapping the cognitive aspects of impulsivity, whereas the rating scales may be more sensitive to the affective aspects of impulsivity, thus explaining the discrepancies in the findings between self-report and behavioral measures of impulsivity.

In relation to dysexecutive symptoms, the two subgroups' were not different in either one of the four areas of functioning associated with executive difficulties –

emotional and personality changes, motivational changes, behavioral changes, and cognitive changes. Nonetheless, these findings cannot be generalized as they were based on only the eighteen students that comprised the low/high externalizing behaviors group.

5.6.4. Differences between adolescents in the low/high internalizing behaviors group

Data analyses differentiating between adolescents in the low/high internalizing behaviors group generated important findings, both in relation to adolescents' psychopathic traits *and* adolescents' dysexecutive symptoms.

In relation to psychopathic traits, analyses were conducted both for the quantitative measures and the behavioral measures. In regards to the callous-unemotional dimension, there were no differences between adolescents in the high internalizing behaviors subgroup and adolescents in the low internalizing behaviors subgroup. What this means is that adolescents who were reported as expressing more inner-directed behavior difficulties, such as withdrawn symptoms and anxiety/depression, did not demonstrate the characteristics of the callous-unemotional dimension (e.g., superficial charm, lack of guilt and empathy) to a greater degree than adolescents who did not experience such internalizing symptoms. Similar results were also obtained in regards to the constructs of narcissism and impulsivity; no differences in the levels of narcissism and impulsivity were found between the subgroup that exhibited more internalizing behaviors and the subgroup that exhibited significantly less internalizing behaviors. Additionally, as impulsivity was the trait examined in more detail, differences between the low/high group in regards to the three subscales of the construct of impulsivity – thrill-seeking, irresponsibility, and impulsiveness – were also investigated, and the results indicated that, similar to the results obtained regarding the constructs of C-U

traits, narcissism, and impulsivity, there was no difference between the two groups in either test measure. Likewise, comparable findings were obtained when analyzing group differences in the performance of the participants in the behavioral measures of impulsivity from the second phase of the study. The first behavioral measure of impulsivity employed was the GoStop Impulsivity Paradigm, and data analysis showed that the two groups of adolescent participants did not differ in their levels of impulsivity in neither one of the four stop delays; in other words, the degree of impulsivity did not differ between adolescents who evidence internalizing symptomatology and the control group. The second behavioral measure of impulsivity employed was the Two Choice Impulsivity Paradigm (TCIP), and similar to the GoStop Impulsivity Paradigm, the two groups of participants did not differ in their levels of impulsivity.

In relation to dysexecutive symptoms, the two subgroups' were not different in either one of the four areas of functioning associated with executive difficulties – emotional and personality changes, motivational changes, behavioral changes, and cognitive changes. Even so, again, these findings are difficult to generalize as they were based on only the eighteen students that comprised the low/high internalizing behaviors group.

5.6.5. Differences between fathers and mothers

Data analyses differentiating between fathers and mothers generated important findings, both in relation to parenting practices *and* parent-adolescent relationship. Additionally, adolescent sex differences were reported in relation to how they respond to parent practices and parent-adolescent relationship.

Regarding parental control, significant differences were found for fathers and mothers; according to the adolescent participants, fathers demonstrate more behavioral

control than mothers; in other words, when compared, fathers employ to a greater degree the behavior control tactics (e.g. rules setting and monitoring) that are used to control and regulate the adolescent's behavior. In contrast, the opposite was found for psychological control; adolescents regard their mothers as using more psychological control tactics (e.g. love withdrawal and guilt induction) than fathers. Likewise, when examining boys' and girls' reports, separately, similar data were obtained. Both boys and girls perceived their fathers as using greater behavioral control tactics than mothers, and their mothers as using more psychological control practices than fathers. Furthermore, differences in reports on parental control, for boys and girls, were also examined. The results indicated that boys and girls did not differ in their experiences of mother behavior control, father behavior control, and father psychological control. Nevertheless, for mother psychological control, boys did experience more psychological control than girls. This finding is in line with previous research which also reported that boys reported higher mother psychological control tactics than girls (Barber, 1996).

Regarding parent-adolescent conflict, significant differences were also found for fathers and mothers; on average, mother-adolescent conflict was higher than father-adolescent conflict, and this result was also similar for boys and girls; both boys and girls shared a more negative relationship with their mothers than their fathers. Considering that mothers displayed more psychological control tactics than fathers, it is thus reasonable to expect mother-adolescent conflict to be more evident than father-adolescent conflict. Nevertheless, to establish such a causative association requires further analyses of the data. Finally, differences in mother-adolescent conflict and father-adolescent conflict, for boys and girls, were also examined. Results showed that mother-adolescent conflict was significantly higher in girls than boys. In contrast, as regards father-adolescent conflict, no sex differences were found. The finding that,

when compared to boys, girls experience more mother-adolescent conflict comes as to no surprise, as previous findings have consistently reported similar conclusions (Allison & Schultz, 2004; Rudolph & Hammen, 1999); for instance, Allison and Schultz (2004) found that, even though, boys and girls both experienced conflict with their parents, girls reported more intense conflict with parents than boys. Nevertheless, past research did not differentiate between mother-adolescent conflict and father-adolescent conflict. The present study demonstrates that although girls do indeed experience more parent-adolescent conflict than boys, this is only true for mother-adolescent conflict.

5.7. Contribution of the present study

According to the ecological (Bronfenbrenner, 1977) model, factors such as individual characteristics and parenting characteristics interact in determining human development. Indeed, there is a general agreement in the fields of Developmental Psychology and Developmental Psychopathology that the interaction between characteristics of the children's individuality and parental factors, such as qualities of parental rearing practices determine adaptive or maladaptive outcomes (Kochanska et al., 2013). So, it is understandable that research on individual characteristics and parental correlates of externalizing and internalizing behaviors is significant. The present study contributes to the existing literature in a number of ways, and, also, has practical implications as well.

First and foremost, specific findings of the present study challenge previously established findings. For example, behavioral control was traditionally associated with externalizing behaviors, whereas psychological control was associated with internalizing behaviors. However, our results indicated that, for mid-to-late adolescents, behavior control is not related to externalizing behaviors, while psychological control was related

to both externalizing and internalizing symptoms. Furthermore, the present study also challenges the traditional notion that the callous–unemotional dimension is the most important dimension of psychopathy for predicting externalizing behaviors. The results indicate that externalizing behaviors are explained by behavioral psychopathic symptoms (e.g., impulsivity), and not by interpersonal (e.g., narcissism) or affective (e.g., callous-unemotionality) traits.

Secondly, the study explored both the direct and indirect paths through which behavior difficulties emerge. The indirect paths were examined through the use of moderators. Moderators are important to be studied; they indicate *under what conditions* or *to whom* the relationship between independent and dependent variables exist. In this research study, three psychopathic traits served as moderators – callous-unemotional (C-U) traits, narcissism, and impulsivity. Results indicated a number of moderator effects; for example, the relationship between mother-adolescent conflict and internalizing behaviors was moderated by the presence of impulsivity; when mother-adolescent conflict was low, experiences of internalizing symptoms were very similar for all adolescents; nevertheless, when mother-adolescent conflict was high, internalizing behaviors were substantially more evident in more impulsive adolescents. Moderation effects provide evidence that certain individuals respond differently to parenting practices or quality of relationships. One other strength of the present study is that it addressed the limitation of past research wherein C-U traits was the predominant trait examined as a moderator, by including the other two facets of psychopathy as well; narcissism and impulsivity. Furthermore, the present study also examined the moderation role of psychopathic traits in the relationship between parent control and parent-adolescent relationship, and internalizing behaviors as well. Past research has often neglected this relationship, so, the results of the present study offer an insight as

to how psychopathic traits may be indirectly related to the development of internalizing behaviors as well.

An important contribution of the present research is the inclusion of fathers in the study. Due to the fact that inclusion of fathers in research concerning children's and adolescent's development within multiple family contexts is often neglected, meaningful conclusions regarding parental importance as a whole are difficult to draw. The present study hypothesized that both parent figures are important for the adolescent's behavioral and psychosocial adjustment, and the findings support this hypothesis. Both mothers and fathers were important in determining the degree to which externalizing and/or internalizing behaviors would be experienced.

Conclusions of the present study have practical applications as well, as they can provide novel approaches in parent training programmes. For example, prevention and intervention methods can benefit from the findings that psychological control is strongly related to externalizing and internalizing behaviors, that the relationship between parent practices and parent-adolescent relationship, and externalizing and internalizing behaviors are moderated by psychopathic traits, and that both parents are particularly important for the behavioral and psychosocial well-being of their child. The finding that psychopathic traits moderate the relationship between specific parent practices, parent-adolescent relationship, and externalizing and internalizing behaviors, has far-reaching implications as to how one works with adolescents displaying externalizing or internalizing behaviors. Additionally, parenting skills training programmes should highlight the importance that both parents play in the well-being of their child, and therefore, encourage both parents to be positively involved in their child's life.

Further strengths of the study include the exploration of several group differences, such as sex differences, and low/high group differences. A very important finding is that

adolescents who differ in their levels of displaying externalizing or internalizing behaviors are, at most, also different in the degree they demonstrate psychopathic trait symptoms. For example, adolescents who show signs of increased aggressive behaviors evidence greater callous-unemotionality than adolescents who are not aggressive. Furthermore, the in-depth exploration of impulsivity contributes to the existing literature, as studies which have assessed measures from multiple domains in the same participants are few (cited in Meda et al., 2009). Quantitative measures of impulsivity give rise to self-awareness and possible demand characteristics issues, issues which biases research findings. Alternatively, laboratory measures are unaffected by self-awareness and demand characteristics issues. This highlights the importance of using multi-method assessments in the exploration of composite variables. Nonetheless, even so, conflicting findings were reported between the quantitative and behavioral measures of impulsivity, which further reinforces the conclusions from previous studies on inconsistencies between quantitative and laboratory measures (Gioia, Isquith, & Kenealy, 2008; Reynolds et al., 2006). As such, it has been proposed that self-reports and behavioral measures probably measure different impulsivity domains (Reynolds et al., 2006).

Finally, quantitative data were gathered from three main informants – the adolescents, and their fathers and mothers. Parents reported about their relationship with their child (the degree to which their relationship was characterized by negativity and hostility), and on their children's behavioral and emotional problems (aggression, delinquency, withdrawn behaviors, somatic problems, anxious/depressed symptoms), whereas adolescents reported their personal characteristics (psychopathic traits; C-U traits, narcissism, and impulsivity), and their perceptions of their parents' behavioral and psychological control tactics. Using multi-informants minimizes the chances that any

statistical findings would be due to common source variance. In addition, using multiple informants regarding the same topic (such as, for example, both parents providing data on their children's externalizing and internalizing behaviors) increases the reliability and credibility of that particular measurement.

All in all, the results of the present study create important methodological avenues for further research, as well as, provide novel approaches in parent training programmes.

5.8. Limitations of the present study and recommendations for further research

Despite the fact that the results have contributed to the existing literature in a number of ways, several limitations of the present study should be noted. First of all, the findings of the present study cannot be generalized to children of all ages. The youth who participated in the study were in their mid-to-late adolescence, a life period wherein numerous changes take place in the lives of children. Accordingly, other life periods could provide a different picture of the relationship between parental factors, personal factors, and externalizing and internalizing behaviors.

Another limitation relates to the low effect sizes which certain predictors have. Even though statistically significant relationships were established, the fact that low effect sizes were found means that we should be cautious when interpreting these findings. In addition, as regards the quasi-experimental method which we employed in the second phase of the study, one limitation is the relatively small sample of participants (18 participants in each group); therefore, the results from the second phase of the study cannot be generalized to the whole population. Nevertheless, using a larger number of participants was beyond our control, as selection of participants for the second phase of the study was dependent on whether adolescents who were interested in participating

had a score for externalizing or internalizing behaviors which was 2 Standard Deviations (SD) above or below the mean.

Furthermore, one other limitation of the present study is the reliance on adolescents as the only reporter of their psychopathic traits, and behavioral and psychological control, and on parents as the only reporter of their relationship with their child. The fact is, that quantitative measures give rise to self-awareness and possible demand characteristics issues; for instance, taking parent-adolescent conflict into consideration, a factor which, in this study, was measured solely through parent-reports, one limitation of using a simple informant (e.g., the parent) is the fact that that informant may not respond objectively, but instead, respond in a way that would not challenge his parenting abilities. Consequently, inaccurate responding may produce misleading results or ambiguous important relationships between variables.

Finally, the direction of the theorized effects of parental factors on externalizing and internalizing behaviors cannot be confirmed due to the, unidimensional, cross-sectional nature of the data. It is possible that the direction is actually reverse; for example, taking psychological control into consideration, parents who perceive their children as exhibiting externalizing or internalizing may increase their attempts to shape the personality of their child through psychological control tactics.

Taking all these drawbacks into consideration, future research should aim to address these limitations. First and foremost, it is essential to include multiple informants regarding each variable of interest. Even though this proposition seems far-fetched, means should be applied to measure variables in an objective and reliable way, as well, to distinguish between perceptions and reality with respect to aspects of parenting.

Additionally, future studies interested in the relationship between impulsivity and internalized or externalized problems in adolescence could build on the learning outcome of the present study and either avoid the experimental task or improve the power of the sample. That is, either focus exclusively on paper-and-pencil measures of impulsivity, or include a larger number of participants in the quasi-experiment by modifying, for example, the recommended cut-off points in the distribution of scores regarding internalizing and externalizing problems.

Future research should consider the limitations of cross-sectional designs. Instead, longitudinal data provides additional information concerning changes in the associations over time; for example, one finding of the present study is the lack of a predictive relationship between behavioral control and externalizing or internalizing behaviors. One suggestion is that participants' age should be considered when interpreting the results; it may not be that behavioral control is unimportant in determining adolescents' behavioral and psychosocial adjustment, but instead, it could be that behavioral control may *no longer* be important, as we would expect mid-to-late adolescents, to – by now – know which behaviors are acceptable or unacceptable. Nevertheless, it is not possible to address this proposition using a cross-sectional design; instead, only longitudinal data would provide the necessary information concerning changes in the associations over time. Furthermore, application of transactional models would be helpful in answering questions about reciprocal effects between adolescents and their parents.

Furthermore, if considering Bronfenbrenner's (1977) ecological model, which proposes that there are multiple environmental systems with which children and adolescents interact, this means that other social contexts (e.g., peers, teachers) may affect family dynamics and the development of externalizing and internalizing behaviors. Accordingly, future research should also focus on other theoretical perspectives that

may be important in the exhibition of externalizing and internalizing behaviors. For instance, the relative importance of marital quality or marital conflict in relation to the exhibition of adolescents' behavior difficulties should be considered. Additionally, as other social contexts may be significant, future research should also focus on the role of contexts such as the school (e.g., the school learning environment, and the school social environment), and peers (e.g., quality of peer relationships, peer group affiliation, and peer antisocial behavior).

Finally, research has consistently indicated that children and adolescents who experience a conflicting parent-child relationship, or whose parents employ negative rearing practices are more prone in expressing externalizing behaviors, such as aggression, conduct disorders, and delinquency, or internalizing behaviors, such as depression and anxiety. Nevertheless, some individuals exposed to these adverse parenting practices or negative parent-child relationships are able to develop with few if any difficulties. What is it about some children that aid them to function well despite their adversity? Researchers have considered resilience as one factor that aids children to overcome their negative experiences with their parents; a dynamic process wherein an individual displays positive adaptation despite experiences of significant adversity or trauma (Luthar, Cichetti, & Becker, 2000). Future research should also focus in exploring the moderating effect of protective factors, such as resilience, in the relation between parental control, parent-adolescent conflict, and adolescents' problem behaviors (i.e., externalizing behaviors and internalizing behaviors). Establishing such moderation effects potentially has practical implications for social skills prevention and intervention programmes designed to boost social competence.

FINAL CONCLUSIONS

Externalizing and internalizing problems are important issues which should not be overlooked. Consequently, identifying the underlying factors that contribute in the development of externalizing and internalizing problems is of crucial importance, as it has various practical implications.

The data that were obtained from the present study suggest that parenting factors and personal factors are linked to externalizing and internalizing behaviors, and, furthermore, adolescent's personality traits function as moderators in the relationship between certain aspects of parenting and externalizing and internalizing behaviors.

More specifically, parental use of psychological control and parent-adolescent conflict predicted both externalizing and internalizing behaviors. When parents increasingly employed psychological control tactics, such as love withdrawal, guilt induction, and devaluation, this had adverse effects on adolescents' behavioral and psychosocial well-being. Given that participants in the present study were mid-to-late adolescents, and adolescence is known to be a period of increased striving and need for autonomy and independence, this finding was sensible. Consequently, the findings of the present study demonstrate that efforts should be made to avoid the use of such negative child rearing practices. In essence, given that mid-to-late adolescents are close to reaching adulthood, efforts should be made to aid adolescents in trusting their own abilities and ideas. So, parents should be encouraged to employ positive and proactive rearing practices that will further encourage young people into trusting their own uniqueness, and thus, gaining the positive self-concept and autonomy they seek.

Furthermore, the present findings also support and encourage a positive parent-adolescent relationship. The findings suggest that the relationship formed between a child and his parents is of critical significance as it seems to reflect adolescent's future

behaviors and interpersonal relationships. Therefore, for adolescents' positive behavioral and psychosocial adjustment, it is argued that parents should seek a warm and positive relationship with their adolescent children.

The findings of the present study should, additionally, be taken into consideration in the design and implementation of prevention and intervention programmes. First and foremost, both parents should be encouraged to be involved in the lives of their children. Despite the fact that traditional views considered mothers to be the most influential for their child's behavioral and psychosocial adjustment, the present findings contradict these traditional notions. This means that prevention and intervention programmes should emphasize the importance of both parents in the well-being of children, and promote positive father involvement as much as positive mother involvement. Furthermore, the present findings provide support that traditional approaches to parenting skills training need revision and modifications. In effect, understanding that the association between parental factors and externalizing and internalizing behaviors is stronger for adolescents with certain characteristics means that practitioners working with children should modify their approaches in order to meet the needs of parents whose adolescent children appear less responsive to recommended discipline or recommended parenting practices.

All in all, taking into consideration the findings of the present study, one obtains a more comprehensive idea about the personal and family dynamics of externalizing and internalizing behaviors during the adolescent years, and thus, can consider novel and innovative approaches as to how such behavior difficulties can be prevented, lessened, or eradicated.

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APPENDIX A

Student's Demographic Information

School: _____ Grade (A', B', or C'): _____

Gender: Boy ☐ Girl ☐ Age: _____

Place of Residence: _____

Father's Education Background:

Secondary Education	☐	Occupation: _____
Tertiary Education	☐	
Postgraduate (Master's)	☐	
Postgraduate (PhD, Doctorate)	☐	
Other: _____	☐	

Mother's Educational Background:

Secondary Education	☐	Occupation: _____
Tertiary Education	☐	
Postgraduate (Master's)	☐	
Postgraduate (PhD, Doctorate)	☐	
Other: _____	☐	

APPENDIX B

The Youth Psychopathic Traits Inventory

Next to each item, the numbers 1 to 5 are presented. Please choose, for each item, the number which best represents you:

1	2	3	4	5
Not at all Representative	Somewhat Representative	Unsure	Representative	Very Representative

1	I like to be where exciting things happen.	1	2	3	4	5
2	I usually feel calm when other people are scared.	1	2	3	4	5
3	I prefer to spend my money right away rather than save it.	1	2	3	4	5
4	I get bored quickly when there is too little change.	1	2	3	4	5
5	I have probably skipped school or work more than most other people.	1	2	3	4	5
6	It's easy for me to charm and seduce others to get what I want from them.	1	2	3	4	5
7	It's fun to make up stories and try to get people to believe them.	1	2	3	4	5
8	I have the ability not to feel guilt and regret about things that I think other people would feel guilty about.	1	2	3	4	5
9	I consider myself as a pretty impulsive person.	1	2	3	4	5
10	I'm better than everyone on almost everything.	1	2	3	4	5
11	I can make people believe almost anything.	1	2	3	4	5
12	I think that crying is a sign of weakness, even if no one sees you.	1	2	3	4	5
13	If I won a lot of money in the lottery I would quit school or work and just do things that are fun.	1	2	3	4	5
14	I have the ability to con people by using my charm and smile.	1	2	3	4	5
15	I am good at getting people to believe in me when I make something up.	1	2	3	4	5
16	I have often been late to work or classes in school.	1	2	3	4	5
17	When other people have problems, it is often their own fault, therefore, one should not help them.	1	2	3	4	5

18	It often happens that I talk first and think later.	1	2	3	4	5
19	I have talents that go far beyond other people's.	1	2	3	4	5
20	It’s easy for me to manipulate people.	1	2	3	4	5
21	I seldom regret things I do, even if other people feel that they are wrong.	1	2	3	4	5
22	I like to do things just for the thrill of it.	1	2	3	4	5
23	It’s important to me not to hurt other people’s feelings.	1	2	3	4	5
24	Sometimes I lie for no reason, other than because it's fun.	1	2	3	4	5
25	To be nervous and worried is a sign of weakness.	1	2	3	4	5
26	If I get the chance to do something fun, I do it no matter what I had been doing before.	1	2	3	4	5
27	When someone asks me something, I usually have a quick answer that sounds believable, even if I've just made it up.	1	2	3	4	5
28	When someone finds out about something that I’ve done wrong, I feel more angry than guilty.	1	2	3	4	5
29	I get bored quickly by doing the same thing over and over.	1	2	3	4	5
30	The world would be a better place if I were in charge.	1	2	3	4	5
31	To get people to do what I want, I often find it efficient to con them.	1	2	3	4	5
32	It often happens that I do things without thinking ahead.	1	2	3	4	5
33	Pretty often I act charming and nice, even with people I don't like, in order to get what I want.	1	2	3	4	5
34	It has happened several times that I've borrowed something and then lost it.	1	2	3	4	5
35	I often become sad or moved by watching sad things on TV or film.	1	2	3	4	5
36	What scares others usually doesn’t scare me.	1	2	3	4	5
37	I'm more important and valuable than other people.	1	2	3	4	5
38	When I need to, I use my smile and my charm to use others.	1	2	3	4	5
39	I don’t understand how people can be touched enough to cry by looking at things on TV or movie.	1	2	3	4	5
40	I often don't/didn’t have my school or work assignments done on time.	1	2	3	4	5

41	I am destined to become a well-known, important and influential person.	1	2	3	4	5
42	I like to do exciting and dangerous things, even if it is forbidden or illegal.	1	2	3	4	5
43	Sometimes I find myself lying without any particular reason.	1	2	3	4	5
44	To feel guilty and remorseful about things you have done that have hurt other people is a sign of weakness.	1	2	3	4	5
45	I don't let my feelings affect me as much as other people's feelings seem to affect them.	1	2	3	4	5
46	It has happened that I've taken advantage of (used) someone in order to get what I want.	1	2	3	4	5
47	I like to spice up and exaggerate when I tell about something.	1	2	3	4	5
48	To feel guilt and regret when you have done something wrong is a waste of time.	1	2	3	4	5
49	I usually become sad when I see other people crying or being sad.	1	2	3	4	5
50	I've often gotten into trouble because I've lied too much.	1	2	3	4	5

APPENDIX C

Children's Report on Parent Behavior Inventory

In the table that follows, there are a number of items. Read carefully each item, and then, put a √ in the box that best represents you.

My mother:		Never (1)	Some-times (2)	Often (3)	Very Often (4)	Always (5)
1	Tells me of all the things she had done for me.					
2	Says, if I really cared for her, I would not do things that cause her to worry.					
3	Would like to be able to tell me what to do all the time.					
4	Is always telling me how I should behave.					
5	Wants to control whatever I do.					
6	Is always trying to change me.					
7	Only keeps rules when it suits her.					
8	Is less friendly with me, if I do not see things her way.					
9	Will avoid looking at me when I have disappointed her.					
10	If I have hurt her feelings, stops talking to me until I please her again.					
11	Believes in having a lot of rules and sticking to them.					
12	Insists I must do exactly as I am told.					
13	Is very strict with me.					
14	Gives hard punishment.					
15	Is easy with me.					
16	Lets me off easy when I do something wrong.					
17	Gives me as much freedom as I want.					
18	Lets me go any place I please without asking.					
19	Lets me go out any evening I want.					
20	Lets me do anything I like to do.					

APPENDIX D

Children's Report on Parent Behavior Inventory

In the table that follows, there are a number of items. Read carefully each item, and then, put a √ in the box that best represents you.

My father:		Never (1)	Some-times (2)	Often (3)	Very Often (4)	Always (5)
1	Tells me of all the things he had done for me.					
2	Says, if I really cared for him, I would not do things that cause him to worry.					
3	Would like to be able to tell me what to do all the time.					
4	Is always telling me how I should behave.					
5	Wants to control whatever I do.					
6	Is always trying to change me.					
7	Only keeps rules when it suits him.					
8	Is less friendly with me, if I do not see things his way.					
9	Will avoid looking at me when I have disappointed him.					
10	If I have hurt him feelings, stops talking to me until I please him again.					
11	Believes in having a lot of rules and sticking to them.					
12	Insists I must do exactly as I am told.					
13	Is very strict with me.					
14	Gives hard punishment.					
15	Is easy with me.					
16	Lets me off easy when I do something wrong.					
17	Gives me as much freedom as I want.					
18	Lets me go any place I please without asking.					
19	Lets me go out any evening I want.					
20	Lets me do anything I like to do.					

APPENDIX E

Parent's Demographic Information

Child's School: _____ Grade (A', B', or C'): _____

Gender: Male ☐ Female ☐ Age: _____

Place of Residence: _____

Marital Status:

Single	☐
Married	☐
Divorced	☐
Widowed	☐
Other: _____	☐

Educational Background:

Secondary Education	☐
Tertiary Education	☐
Postgraduate (Master's)	☐
Postgraduate (PhD, Doctorate)	☐
Other: _____	☐

Occupation: _____

APPENDIX F

Child-Parent Relationship Scale

In the table that follows, there are a number of items about your relationship with your child. Read carefully each item, and then, put a √ in the box that best represents you.

		Definitely Does Not Apply (1)	Not really (2)	Neutral (3)	Some-what Applies (4)	Definitely Applies (5)
1	My child and I always seem to be struggling with each other.					
2	My child easily becomes angry at me.					
3	My child feels that I treat him/her unfairly.					
4	My child sees me as a source of punishment and criticism.					
5	My child expresses hurt or jealousy when I spend time with other children.					
6	My child remains angry or is resistant after being disciplined.					
7	Dealing with my child drains my energy.					
8	When my child is in a bad mood, I know we're in for a long and difficult day.					
9	My child's feelings toward me can be unpredictable or can change suddenly.					
10	Despite my best efforts, I'm uncomfortable with how my child and I get along.					
11	My child whines or cries when he/she wants something from me.					
12	My child is sneaky or manipulative with me.					

APPENDIX G

The Child Behavior Checklist

Below is a list of items that describe children and youths. For each item that describes your child **now or within the past 6 months**, please circle the **2** if the item is **very true or often true** of your child. Circle the **1** if the item is **somewhat or sometimes true** of your child. If the item is **not true** of your child, circle the **0**. Please answer all items as well as you can, even if some do not seem to apply to your child.

0 = Not True (as far as you know)
1 = Somewhat or Sometimes True
2 = Very True or Often True

1	Bragging, boasting	0	1	2
2	Cries a lot	0	1	2
3	Demands a lot of attention	0	1	2
4	Doesn't seem to feel guilty after misbehaving	0	1	2
5	Easily jealous	0	1	2
6	Breaks rules at home, school, or elsewhere	0	1	2
7	Fears certain animals, situations, or places, other than school (describe): _____ _____	0	1	2
8	Fears going to school	0	1	2
9	Fears he/she might think or do something bad	0	1	2
10	Feels he/she has to be perfect	0	1	2
11	Feels worthless or inferior	0	1	2
12	Gets in many fights	0	1	2
13	Would rather be alone than with others	0	1	2
14	Lying or cheating	0	1	2
15	Nervous, high-strung, or tense	0	1	2
16	Too fearful or anxious	0	1	2
17	Feels dizzy or lightheaded	0	1	2
18	Feels too guilty	0	1	2
19	Overtired without good reason	0	1	2
20	Physical problems **without known medical cause:**			
	a. Aches or pains (**not** stomach or headaches)	0	1	2

	b. Headaches	0	1	2
	c. Nausea, feels sick	0	1	2
	d. Problems with eyes (**not** if corrected by glasses) (describe): _____ _____	0	1	2
	e. Rashes or other skin problems	0	1	2
	f. Stomachaches	0	1	2
	g. Vomiting, throwing up	0	1	2
	h. Other (describe): _____ _____	0	1	2
21	Physically attacks people	0	1	2
22	Screams a lot	0	1	2
23	Secretive, keeps things to self	0	1	2
24	Sets fires	0	1	2
25	Showing off or clowning	0	1	2
26	Too shy or timid	0	1	2
27	Stares blankly	0	1	2
28	Steals at home	0	1	2
29	Steals outside the home	0	1	2
30	Sulks a lot	0	1	2
31	Suspicious	0	1	2
32	Swearing or obscene language	0	1	2
33	Teases a lot	0	1	2
34	Temper tantrums or hot temper	0	1	2
35	Threatens people	0	1	2
36	Truancy, skips school	0	1	2
37	Unhappy, sad, or depressed	0	1	2
38	Vandalism	0	1	2
39	Withdrawn, doesn't get involved with others	0	1	2
40	Worries	0	1	2

APPENDIX H

Parent Information Letter

As part of a survey conducted by Maria Symeou, PhD candidate at the Department of Psychology, University of Cyprus, a set of questionnaires have been designed which aim at investigating the interpersonal and intrapersonal differences in the exhibition of externalizing and internalizing behaviors, in which you are asked to participate.

In the questionnaire, there are no right or wrong answers. What matters is solely your personal opinion. Please answer the following questions as honestly as you can. The survey is anonymous, your details will not be published anywhere and your individual responses will only be known by the researcher.

In the questions that follow, please place a √ in the answers that mostly express your personal opinion. Your cooperation for the successful completion of this research is essential. Please answer all the questions that follow one after the other, in the order given.

Thank you for your cooperation.

APPENDIX I

Parent Consent Form

Dear parents/legal guardians,
My name is Maria Symeou and I am a PhD student at the Department of Psychology, University of Cyprus. Among the requirements for the completion of my PhD study, is the successful conduct of a research study. My research study deals with the interpersonal and intrapersonal differences in the exhibition of externalizing and internalizing behaviors in the adolescent population, and is supervised by Dr. Stelios Georgiou, Professor at the Department of Psychology, University of Cyprus.
For the successful completion of my research study, adolescents as well as their parents/legal guardians are asked to complete a set of questionnaires. It is important to note that I have received all the necessary approvals from the Department of Psychology of the University of Cyprus, the Cyprus National Bioethics Committee, the Ministry of Education and Culture, as well as the school council in the school where your child attends.
With the present letter, I ask for your consent to be granted for your child's participation in the study. Participation of the adolescents is important, as it will enrich us with information regarding their personal and familial factors that contribute in the exhibition of behavior difficulties, something that will, in turn, aid in the further development of prevention and intervention programmes for behavior problems.
It is important to know that the research is anonymous, and that your child's information will not be published anywhere. Participation will be voluntary and will not exceed 20-25 minutes. Following their participation, a debriefing form will be given informing the participants in more detail of the purposes of the study.
Adolescent data collection will take place in approximately 1 week. If you wish for your child to participate in the study, please sign the present form.
Thank you very much for your time,

With regards,

Maria Symeou

I provide my consent for my child to participate in the present study: **Yes** ☐ **No** ☐

Signature: _____ Date: _____

APPENDIX J

Student Information Letter

As part of a survey conducted by Maria Symeou, PhD candidate at the Department of Psychology, University of Cyprus, a set of questionnaires have been designed which aim at investigating the interpersonal and intrapersonal differences in the exhibition of externalizing and internalizing behaviors, in which you are asked to participate.

In the questionnaire, there are no right or wrong answers. What matters is solely your personal opinion. Please answer the following questions as honestly as you can. The survey is anonymous, your details will not be published anywhere and your individual responses will only be known by the researcher.

In the questions that follow, please place a √ in the answers that mostly express your personal opinion. Your cooperation for the successful completion of this research is essential. Please answer all the questions that follow one after the other, in the order given.

Thank you for your cooperation.

APPENDIX K

Second Phase

Information for the second phase of the study:
For the completion of the purposes of the study, a second phase in the research procedure is also required to be conducted, which will take place in the beginning months of 2015.
In the second phase of the study, approximately 50 adolescents will participate, and participation will be individualized. Even though participation is voluntary, I would appreciate it if you register to participate.
If you are interested in participating in the 2nd phase of the study, please complete your information details below.

Name and Surname (or initials): _____

School: _____

Grade/Class: _____

APPENDIX L

Debriefing Form

Thank you for your participation.

Among the characteristics of the adolescent period is the increase of externalizing (e.g., aggressive behavior) and/or internalizing (e.g., withdrawal) behaviors. The present study examines specific familial factors which have been found to play an important role in the exhibition of behavior difficulties in adolescence. Furthermore, personal characteristics of the adolescent were also examined, so as to investigate the degree to which those personal characteristics can influence the relationship between family factors and externalizing and internalizing behaviors.

Once again, thank you for your participation. Results of the present study will contribute to the existing literature in a number of ways, and will, also, have practical implications as well, as important information will be gathered that will aid in the further development of prevention or intervention programmes for behavior difficulties.

APPENDIX M

Dysexecutive Questionnaire

This questionnaire looks at some of the difficulties that people sometimes experience. We would like you to read the following statements, and rate them on a five-point scale according to your experience.

		Never (1)	Occasion-ally (2)	Some-times (3)	Fairly Often (4)	Very Often (5)
1	I act without thinking, doing the first thing that comes to mind					
2	I find it hard to remember to do things I want to do					
3	I am lethargic, or unenthusiastic about things					
4	I find it difficult to start something					
5	I have difficulty planning for the future					
6	I do or say embarrassing things when in the company of others					
7	I have difficulties deciding what I want to do					
8	I tell people openly when I disagree with them					
9	I struggle to find the words I want to say					
10	I lose my temper easily					
11	I find it hard to stop repeating saying or doing things once I've started					
12	I find it difficult to notice if I make a mistake or do something wrong					
13	I have difficulty thinking ahead					
14	I get concerned when I have worrying thoughts					

15	I am unconcerned about how I should behave in certain situations					
16	I have difficulty showing emotion					
17	I find it difficult to keep several pieces of information in mind at once					
18	I get over-excited about things and can get a bit 'over the top' at these times					
19	I have difficulty realizing the extent of my problems and am unrealistic about the future					
20	I tend to be very restless, and 'can't sit still' for any length of time					
21	I get events mixed up with each other, and get confused about the correct order of events					
22	I find that worrying thoughts persist, no matter how I try to stop them					
23	I really want to do something one minute, but couldn't care less about it the next					
24	I find I get uncontrollable urges to hit something or Someone					
25	I find it hard to complete tasks or activities without structure or direction					
26	I find it difficult to stop myself from doing something even if I know I shouldn't					

27	I talk about events or details that never actually happened, but I believe did happen					
28	I find myself crying or laughing uncontrollably					
29	I find it difficult to keep my mind on something, and am easily distracted					
30	I find that doing or saying things is effortful					
31	I have problems trusting my memory					
32	I will say one thing, but will do something different					
33	I have difficulty expressing emotion					
34	I have problems understanding what other people mean unless they keep things simple and straightforward					
35	I am unaware of, or unconcerned about, how others feel about my behavior					
36	I find it difficult to do or concentrate on two things at once					
37	I have trouble making decisions					

APPENDIX N

The Youth Self-Report (Short Form)

Below is a list of items that describe kids. For each item that describes you **now or within the past 6 months**, please circle the **2** if the item is **very true or often true** of you. Circle the **1** if the item is **somewhat or sometimes true** of you. If the item is **not true** of you, circle the **0**. Please answer all items as well as you can, even if some do not seem to apply to you.

0 = Not True (as far as you know)
1 = Somewhat or Sometimes True
2 = Very True or Often True

1	I brag	0	1	2
2	I cry a lot	0	1	2
3	I try to get a lot of attention	0	1	2
4	I don't feel guilty after doing something I shouldn't	0	1	2
5	I am jealous of others	0	1	2
6	I break rules at home, school, or elsewhere	0	1	2
7	I am afraid of certain animals, situations, or places, other than school (describe): _____ _____	0	1	2
8	I am afraid of going to school	0	1	2
9	I am afraid I might think or do something bad	0	1	2
10	I feel that I have to be perfect	0	1	2
11	I feel worthless or inferior	0	1	2
12	I get in many fights	0	1	2
13	I would rather be alone than with others	0	1	2
14	I lie or cheat	0	1	2
15	I am nervous or tense	0	1	2
16	I am too fearful or anxious	0	1	2
17	I feel dizzy or lightheaded	0	1	2
18	I feel too guilty	0	1	2
19	I feel overtired without good reason	0	1	2
20	Physical problems **without known medical cause:**			

	a. Aches or pains (**not** stomach or headaches)	0	1	2
	b. Headaches	0	1	2
	c. Nausea, feel sick	0	1	2
	d. Problems with eyes (**not** if corrected by glasses) (describe): _____ _____	0	1	2
	e. Rashes or other skin problems	0	1	2
	f. Stomachaches	0	1	2
	g. Vomiting, throwing up	0	1	2
	h. Other (describe): _____ _____	0	1	2
21	I physically attack people	0	1	2
22	I scream a lot	0	1	2
23	I am secretive or keep things to myself	0	1	2
24	I set fires	0	1	2
25	I show off or clown	0	1	2
26	I am too shy or timid	0	1	2
27	I am inattentive or easily distracted	0	1	2
28	I steal at home	0	1	2
29	I steals outside the home	0	1	2
30	My moods or feelings change suddenly	0	1	2
31	I am suspicious	0	1	2
32	I swearing or use dirty language	0	1	2
33	I tease others a lot	0	1	2
34	I have a hot temper	0	1	2
35	I threaten to hurt people	0	1	2
36	I cut classes or skip school	0	1	2
37	I am unhappy, sad, or depressed	0	1	2
38	I am louder than other kids	0	1	2
39	I keep from getting involved with others	0	1	2
40	I worry a lot	0	1	2