



**University  
of Cyprus**

**DEPARTMENT OF PSYCHOLOGY**

**HETEROGENEITY WITHIN CALLOUS-UNEMOTIONAL  
TRAITS: A MULTI-METHOD ASSESSMENT OF FACTORS  
DIFFERENTIATING CALLOUS-UNEMOTIONAL  
ADOLESCENTS WITH AND WITHOUT CONDUCT  
PROBLEMS**

**MARIA-ZOE HADJICHARALAMBOUS**

**A Dissertation Submitted to the University of Cyprus in Partial Fulfilment of the  
Requirements for the Degree of Doctor of Philosophy**

**December 2015**

Maria Zoe Hadjicharalambous

## VALIDATION PAGE

**Doctoral Candidate:** Maria Zoe Hadjicharalambous

**Doctoral Thesis Title:** Heterogeneity within callous-unemotional traits: A multi-method assessment of factors differentiating callous-unemotional adolescents with and without conduct problems

*The present Doctoral Dissertation was submitted in partial fulfilment of the requirements for the degree of Doctor of Philosophy at the **Department of Psychology** and was approved on the 24<sup>th</sup> of November 2015 by the members of the **Examination Committee**.*

**Examination Committee:**

**Research Supervisor:** Kostas Fanti, Assistant Professor

ΠΡΟΣΩΠΙΚΑ  
ΔΕΔΟΜΕΝΑ

**Committee member:** Georgia Panayiotou, Associate Professor (Committee Chair)

ΠΡΟΣΩΠΙΚΑ  
ΔΕΔΟΜΕΝΑ

**Committee member:** Eva Kimonis, Senior Lecturer

ΠΡΟΣΩΠΙΚΑ  
ΔΕΔΟΜΕΝΑ

**Committee member:** Panayiotis Stavrinos, Assistant Professor

ΠΡΟΣΩΠΙΚΑ  
ΔΕΔΟΜΕΝΑ

**Committee member:** Inti Brazil, Assistant Professor

ΠΡΟΣΩΠΙΚΑ  
ΔΕΔΟΜΕΝΑ

## **DECLARATION OF DOCTORAL CANDIDATE**

The present doctoral dissertation was submitted in partial fulfilment 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 Zoe Hadjicharalambous

**ΠΡΟΣΩΠΙΚΑ  
ΔΕΔΟΜΕΝΑ**

## ABSTRACT IN GREEK

Παρόλη την ετερογένεια στα Χαρακτηριστικά Σκληρότητας και Αμεταμέλειας (ΣΑ), οι ομάδες ΣΑ και προβλήματα συμπεριφοράς (ΣΑ+ΠΣ) και ΣΑ χωρίς ΠΣ (ΣΑ-μόνο), δεν υπάρχουν αρκετές πληροφορίες για την ομάδα ΣΑ-μόνο στη βιβλιογραφία. Πιστεύεται ότι τα χαρακτηριστικά ΣΑ αντιπροσωπεύουν το συναισθηματικό παράγοντα της Ψυχοπάθειας, και επίσης είναι ένας αναπτυξιακός πρόδρομος στην ενήλικη ψυχοπάθεια. Γι αυτό, αναμένεται ότι η ομάδα ΣΑ-μόνο να σχετίζεται με χαρακτηριστικά που περιγράφουν άτομα με ψυχοπάθεια που δεν έχουν αντικοινωνική συμπεριφορά ή καταδίκες (επιτυχημένοι ψυχοπαθείς), ενώ η ομάδα ΣΑ+ΠΣ συνδέεται με χαρακτηριστικά που περιγράφουν άτομα με ψυχοπάθεια που έχουν καταδικαστεί για αντικοινωνική συμπεριφορά (αποτυχημένοι ψυχοπαθείς). Από ένα διαχρονικό δείγμα (N=1444), 250 έφηβοι επιλέχθηκαν και προσκλήθηκαν να συμμετάσχουν στην έρευνα, με βάση τα χαρακτηριστικά ΣΑ και τα ΠΣ τους. Κατά μέσο όρο, 149 οικογένειες (ΜΟηλικία=13.09, ΤΑ=2.76, 45.6% θήλυ; 14 δεν ανέφεραν την ηλικία τους) δέχθηκαν να συμμετάσχουν σε ξεχωριστές μελέτες στο πλαίσιο του έργου. Οι έφηβοι ταξινομήθηκαν σε Ομάδα ελέγχου (χαμηλό χαρακτηριστικά ΣΑ, χαμηλά ΠΣ; N=71), ομάδα ΣΑ-μόνο (N=36) και ομάδα ΣΑ+ΠΣ (N=40). Στη μελέτη 1, 43 συμμετέχοντες ερωτήθηκαν σχετικά με την εμπλοκή τους σε παραβιάσεις στο σχολείο και στην κοινωνία ή σε τιμωρίες, μαζί με ερωτήσεις σχετικά με τους τύπους επιθετικής συμπεριφοράς. Στη μελέτη 2, 54 έφηβοι και 135 μητέρες συμπλήρωσαν ερωτηματολόγια μετρώντας ατομικά χαρακτηριστικά (ιδιοσυγκρασία, αυτορρύθμιση, διαπροσωπικά χαρακτηριστικά) της νεολαίας. Στη μελέτη 3, χορηγήθηκαν σε 84 έφηβους ηλεκτρονικά έργα για αξιολόγηση των εκτελεστικών και γνωστικών λειτουργιών. Η ομάδα ΣΑ-μόνο ήταν λιγότερο πιθανό να παραβιάσουν κάποιο κανόνα του σχολείου ή της κοινωνίας και να πιαστούν σε σύγκριση με την ομάδα ΣΑ-ΠΣ. Επιπλέον, η ομάδα ΣΑ-μόνο ήταν λιγότερο παρορμητική, ναρκισσιστική, αντιδραστική και εμφανής επιθετική και λιγότερο ενεργοποιημένη σε ανταμοιβές σε σύγκριση με την ομάδα ΣΑ+ΠΣ. Επίσης, η ομάδα ΣΑ-μόνο ήταν πιο εστιασμένη και εμφάνιζε περισσότερο έλεγχο συμπεριφοράς σε σύγκριση με την ομάδα ΣΑ+ΠΣ. Η ομάδα ΣΑ-μόνο ήταν καλύτερη στην επιλεκτική προσοχή και στρατηγικό σχέδιο σε σύγκριση με την ομάδα ΣΑ+ΠΣ, και έπαιρνε περισσότερα ρίσκα από ότι η ομάδα ελέγχου, αλλά όχι από την ομάδα ΣΑ+ΠΣ. Επίσης, η ομάδα ΣΑ-μόνο εμφάνιζε καλύτερη μη λεκτική γνωστική ικανότητα, αλλά παρόμοιες γνωστικές ικανότητες σε σύγκριση με την ομάδα ΣΑ+ΠΣ. Τέλος, η ομάδα ελέγχου ανέφερε περισσότερα παρόμοια χαρακτηριστικά με την ομάδα ΣΑ-μόνο, παρά με την ομάδα ΣΑ+ΠΣ. Σε γενικές γραμμές, τα ευρήματα παρέχουν

πληροφορίες στην ετερογένεια εντός των χαρακτηριστικών ΣΑ, ενώ εισηγούνται πως η ομάδα ΣΑ-μόνο εξακολουθεί να βρίσκεται σε κίνδυνο σε σύγκριση με την ομάδα ελέγχου. Προτείνοντας παρόμοια χαρακτηριστικά μεταξύ των ομάδων ΣΑ και ομάδων ψυχοπάθειας, τα ευρήματα δείχνουν προς μια αναπτυξιακή συνέχεια, η οποία μπορεί να παρέχει επιπτώσεις για τις θεωρητικές προσεγγίσεις για την επιτυχή και ανεπιτυχή ψυχοπάθεια. Επιπλέον, τα χαρακτηριστικά της ομάδας ΣΑ-μόνο, μπορούν να παρέχουν πληροφορίες για θεραπευτικές εφαρμογές για τα ΠΣ.

## ABSTRACT IN ENGLISH

Despite the heterogeneity within Callous-Unemotional (CU) traits, CU with Conduct Problems (CU+CP) and CU without CP (CU-only) groups, there is limited information for the CU-only group in the literature. CU traits are believed to represent the affective component of psychopathy, and also are a developmental precursor to adult psychopathy. Thus, it is hypothesized that the CU-only group are associated with characteristics describing psychopaths who lack antisocial behavior or convictions (successful psychopaths), while the CU+CP group are associated with characteristics describing psychopaths who are convicted for their antisocial behavior (unsuccessful psychopaths). From a longitudinal sample ( $N=1444$ ), 250 adolescents were selected and invited to participate in the project, based on their CU traits and CP. On average, 149 families ( $M_{age}= 13.09$ ,  $SD= 2.76$ , 45.6% female, 14 missing age data) accepted participating in separate studies within the project. Adolescents were classified into control (low CU, low CP;  $N=71$ ), CU-only ( $N=36$ ) and CU+CP ( $N=40$ ) groups. In study 1, 43 participants were interviewed about their engagement in school and society's violations or punishment, along with questions regarding types of aggression. In study 2, 54 adolescents and 135 mothers completed questionnaires assessing individual characteristics (temperament, self-regulation, interpersonal characteristics) of youth. In study 3, 84 adolescents were administered computerized tasks assessing executive and intellectual functioning. The CU-only group was less likely to break any school or community rules and to get caught compared to the CU+CP group. In addition, the CU-only group was less impulsive, narcissistic, reactive and overt aggressive and less activated to reward than the CU+CP group. Also, the CU-only group was more attentive and displayed more inhibitory control than CU+CP group. CU-only group were better in selective attention and strategic planning than CU+CP group, and took more risk than the control group, but not the CU+CP group. Moreover, the CU-only group displayed better nonverbal intellectual ability but similar verbal ability compared to CU+CP group. Last, youth in the control group reported more similar characteristics to those in the CU-only group than those in the CU+CP group. In general, the findings provide information in heterogeneity within CU traits, while suggesting that youth in the CU-only group is still in risk compared to those in control group. Proposing similar characteristics between CU groups and psychopathy groups, findings point to a developmental continuity, which may provide implications for theoretical perspectives on successful and unsuccessful psychopathy. In addition, the

characteristics of CU-only group can provide information for therapeutic applications over CP.

Maria Zoe Hadjicharalambous

## ACKNOWLEDGMENTS

We always go a step further with the help, support, guidance and effort of other people. Firstly, I would like to thank my supervisor and mentor Dr Kostas Fanti for his endless patience and encouragement during my graduate studies: From my first step into research, by giving me opportunities to work at the Developmental Psychopathology Lab in several research positions to the last stage of this thesis research, by reviewing the texts and assisting me with his great skills structuring the paper. Additionally, he introduced his international network to both me and other PhD students, while giving us the lead to become researchers on our own. And, these, I believe, are the ingredients for the perfect supervision.

I would also like to express my gratitude to my preliminary and final committee members Dr Georgia Panayiotou and Dr Eva Kimonis for their assistance and insights during the initial steps of this thesis, guiding me into paths of research. Despite their busy schedule during this last period, they made time for giving me constructive feedback and suggestions in order to improve my research. Thanks also to Dr Inti Brazil and Dr Panayiotis Stavrinides for also serving my final committee, for making the time to be there and for their suggestions guiding me to paths of reality. I also thank you all for helping me stay aware of people who are not in need for treatment.

Many thanks to my colleagues for their support during the whole steps of this research while working several hours with me at the Lab. Also I would like to thank the participants and those who helped with the data collection: Maria Sikki, Maria Petridou, Myria Ioannou, Vera Flordidou, Eleni Xenofontos, Eleni Filaktou, Eirini Patsali, Georgia Zacharaki, Stephani Christophorou, Loizos Maurokordatos and Andreas Michael.

Most importantly, I would like to thank my dear friends and family, who I wouldn't have done it so far without them. To all my friends, and especially to Bill, Con, Dialehti, Evita, Geo, Gia and Stella, who gave me shelter in their hearts and homes, in order for me to have plenty of space and time to brainstorm and write. To my parents, Kleopas and Evaggelia, and my brother, Christos, who handle my frustration with kindness, and despite the stressful times, I can still feel their unconditional love until this last minute.

Thank you.

## DEDICATION

To those who are *mistakenly* seen  
as damaged..

Maria Zoe Hadjicharalambous

## TABLE OF CONTENTS

VALIDATION PAGE .....	i
DECLARATION OF DOCTORAL CANDIDATE.....	ii
ABSTRACT IN GREEK .....	iii
ABSTRACT IN ENGLISH .....	v
ACKNOWLEDGMENTS .....	vii
DEDICATION.....	viii
TABLE OF CONTENTS .....	ix
LIST OF FIGURES .....	x
LIST OF TABLES .....	xi
LIST OF APPENDICES .....	xii
GENERAL INTRODUCTION.....	xii
STUDY 1: ESTABLISHING THE SUCCESS AMONG YOUTH HIGH ON CALLOUS- UNEMOTIONAL TRAITS WITH AND WITHOUT CONDUCT PROBLEMS .....	6
Methods of Study 1 .....	12
Results of Study 1 .....	15
Discussion of Study 1 .....	17
STUDY 2: CONCEPTUALIZING THE CU-ONLY GROUP IN REGULATION CONTROL, TEMPERAMENTAL AND INTERPERSONAL CHARACTERISTICS .....	23
Methods of Study 2 .....	27
Results of Study 2 .....	32
Discussion of Study 2.....	35
STUDY 3: CONCEPTUALIZING THE CU-ONLY GROUP BASED ON EXECUTIVE AND INTELLECTUAL FUNCTIONING.....	39
Methods of Study 3 .....	44
Results of Study 3 .....	47
Discussion of Study 3.....	48
GENERAL DISCUSSION .....	53
REFERENCES .....	59
FIGURES.....	70
TABLES.....	72
APPENDICES .....	81

## LIST OF FIGURES

### General Introduction

Figure 1: Proposed theoretical model on differentiating CU groups.....	70
Figure 2: Identified groups.....	71

Maria Zoe Hadjicharalambous

## LIST OF TABLES

### General Introduction

Table 1: Description of families invited and participated in the project at least in one study.....	72
Table 2: <i>Participated families in each study and overlapping participated families</i> .....	73
<b>Study 1</b>	
Table 3: Differences between CU groups on success within school environment.....	74
Table 4: Differences between CU groups on success within society environment.....	75
Table 5: Main effects on types of aggression based on youth's reports.....	76
<b>Study 2</b>	
Table 6: Main effects based on youth's self-report.....	77
Table 7: Main effects between identified groups based on mothers' report.....	78
<b>Study 3</b>	
Table 8: Main effects between identified groups based on Executive Function computerized tasks.....	79
Table 9: Main effects between identified groups based on Intellectual Function computerized tasks.....	80

## LIST OF APPENDICES

### Study 1

Appendix A: The law on how society punishes juvenile offenders in Cyprus.....	81
Appendix B: Schools laws and punishments on violations from juvenile offenders in school.....	86
Appendix C: Social interview measuring successful way avoiding incarceration within CU groups in English .....	90
Appendix D: Social interview measuring successful way avoiding incarceration within CU groups in Greek .....	91
Appendix E: Sample of transcripts for Thematic Analysis.....	92
Appendix F: Thematic Analysis for school violations.....	100
Appendix G: Thematic Analysis for society's violations.....	102

## General Introduction

Youth with callous-unemotional (CU) traits (i.e. lack of remorse or guilt, shallow or deficient affect, use of others, unconcerned about performance; Frick, 1998) usually show a severe, aggressive, chronic and stable pattern of conduct problems (CP; CU+CP; e.g. Frick, Cornell, Barry, Bodin, & Dare, 2003a; Frick, Kimonis, Dandreaux, & Farrell, 2003c; Frick, Stickle, Dandreaux, Farrell, & Kimonis, 2005) resulting to the inclusion of CU traits as a specifier for Conduct Disorder in the fifth revision of the Diagnostic and Statistical Manual of Mental Disorders (5<sup>th</sup> ed., DSM-5; American Psychiatric Association, 2013). However, prior research points to a second group high on CU traits with low levels of CP (CU-only; Fanti, 2013; Frick et al., 2003a; Frick, Cornell, Bodin, Dane, Barry, & Loney, 2003b; Fontaine, McCroy, Boivin, Moffitt, & Viding, 2011; Rowe, Maughan, Moran, Ford, Briskman, & Goodman, 2010), proposing heterogeneity within CU traits. While the majority of current studies mainly focuses on the CU+CP group, limited information is provided for the CU-only group (Moffitt et al., 2008; Fanti, Kimonis, Hadjicharalambous, & Steinberg, under review), excluding the possibility of them being in high risk. Therefore, the present study aims to overcome these limitations and conceptualize the profile of individuals in the CU-only group via a) extending the literature on heterogeneity of psychopathy to heterogeneity of CU traits, by reviewing the phenotypic manifestation of CU traits and psychopathy and b) comparing the CU-only group to the CU+CP group, as well as a control group, on their success in evading behavioural problems or apprehension (Study 1), individual characteristics, such as temperament, self-regulation and interpersonal characteristics (Study 2), and behavioural neuropsychological measures related to executive and intellectual functioning (Study 3).

It is believed that CU traits are a developmental precursor to adult psychopathy (e.g. Frick et al., 2003a; Frick et al., 2005; Forsman, Lichtenstein, Andershed, & Larsson, 2008; Loney, Taylor, Butler, & Iacono, 2007; Lynam, Charnigo, Moffitt, Raine, Loeber, & Stouthamer-Loeber, 2009), a personality disorder with characteristics such as superficial charm, insincere, untruthfulness, egocentricity, shallow emotions, lack of remorse, shame and empathy (Cleckley, 1988), often representing the affective component of psychopathy (Hare & Neumann, 2010; Loeber, Burke, & Pardini, 2009). It has been also shown that youth high on CU traits shows features, such as lack of fearfulness, a reward-dominant style and low distress towards the victims of their aggressive behaviours (Barry, Frick, DeShazo, McCoy, Ellis, & Loney, 2000), which are typically associated with adult psychopathy and do not appear in youth with normal development (Frick et al., 2003b). Based on these studies, researchers came to the conclusion that CU traits among youth

represent a downward extension of adult psychopathy (Frick & Ray, 2014). This theory meets the need to identify children at risk for developing these characteristics and the need to understand the etiology and development of psychopathic traits (Caspi & Bem, 1990; Frick 2009), leading to the development of successful treatments. It has been suggested that identification of psychopathy in adolescence could be based even in phenotypical similarity and is associated with future criminality (Vincent & Hart, 2002). Taken together, the present study will use this theory of downward extension of psychopathy to CU traits by first understanding and conceptualizing heterogeneity within psychopathy and CU traits.

### **Heterogeneity within Groups**

Similar to heterogeneity within CU traits (i.e. low and high CP), literature has indicated heterogeneity within psychopathy, with individuals engaging in low and high levels of antisocial behaviour representing successful and unsuccessful psychopathy, respectively (Cleckley, 1988; Hare, 1993). In more detail, an individual with psychopathic traits is defined as unsuccessful when the individual a) was convicted for his crimes by the law or was admitted to a mental institution and b) is characterized by reactive, overt and instrumental antisocial behaviour. An individual with psychopathic traits is defined as successful when the individual a) is able to avoid any conviction or forensic mental health system or prosecution and b) is less likely to engage in reactive/ overt antisocial behaviour (Gao & Raine, 2010; Widom, 1977).

Individuals with unsuccessful psychopathy are responsible for more than 50% of the serious crimes in society (Hare, 1993; 1998; 2003) and 20% of them are at high risk to end up in jail or in psychiatric hospitals (Cleckley, 1988; Hare, 1993). They use extreme forms of antisocial behaviour, utilizing overt and instrumental aggressive methods of manipulation, such as “blue-collar crimes” and physical violence (Gao & Raine, 2010). Similar to those with unsuccessful psychopathy, individuals with CU+CP are characterized with early behaviour problems (APA, 2013), tend to use overt and instrumental antisocial behaviour (Munoz, Frick, Kimonis, & Aucoin, 2008), are bullies (Fanti & Kimonis, 2012), and have more contact with the police than other youth (Frick et al., 2005).

On the other hand, individuals with successful psychopathy seem to exhibit the core/ affective psychopathic traits without the presence of overt antisocial behaviour (e.g. Cleckley, 1988; Hare, 1993; Lykken, 1995; Babiak & Hare, 2006). One theoretical framework suggests that individuals with successful psychopathy commit offences that fail to reach the level for prosecution (Widom, 1977). A possible explanation is that they are not identified by the justice system because they usually commit white-collar crimes (i.e.

fraud, embezzlement, stock manipulation, deceitful behaviour toward co-workers), gaining status, power, and money (Babiak & Hare, 2006; Boddy, 2006). Additionally, findings show that even if they have been arrested in the past, they are more likely to avoid any conviction or forensic mental health systems, possibly because of their chameleon-like abilities (Widom, 1977). An alternative explanation is that they are usually in higher societal levels or work in esteemed jobs, such as politicians, lawyers etc (Lykken, 1995), which makes it easier to cover their dubious actions (Andrews & Furniss, 2009), by using their enhanced executive functioning or intellectual ability (Gao & Raine, 2010) to bribe others and avoid conviction. Similar to individuals with successful psychopathy, few studies have proved the existence of individuals with CU traits but with no or low CP, in community samples. It seems that CU-only youth tend to have elevated peer problems and low family social-support (e.g. Fanti, 2013; Rowe et al., 2010). However, there is limited information as to why youth in the CU-only group are successful in avoiding antisocial behavior and/or punishment conviction.

It was found that some individuals with psychopathy present different levels of interpersonal-affective Vs antisocial features of psychopathy (Loving, 2002). It seems that the combination of elevated levels of the interpersonal-affective features, but reduced or normal-range levels of antisocial component might give to the individual with psychopathic traits the ability to function adaptively in the society without experiencing legal problems. Moreover, antisocial behaviour is associated with impulsivity (Farrington, 2005; Luengo, Carrillo de la Pena, Otero, & Romero, 1994; Miller, Flory, Lynam, & Leukefeld, 2003; Moffitt, 1993; Morgan & Lilienfeld, 2000), a factor that reflects deficits in executive functioning (EF; e.g. ability for planning, decision making, and problem-solving; Hison, Jameson, & Whitney, 2003; Kockler & Stanford, 2008; Newman, MacCoon, Vaugh, & Sadeh, 2005; Whiteside & Lynam, 2001). Taken together, it was suggested that individual characteristics and functioning provide for unsuccessful psychopaths a criminal behavioural expression of their underlying trait disposition (Gao & Raine, 2010).

### **Overview of Present Project**

The theoretical model of the present project proposes possible ways by which the CU-only group is differentiated from the CU+CP group. For the purposes of the current project, successfulness that is expected to characterize the CU-only group is defined by low levels of engagement in overt antisocial behaviour or punishment, whereas unsuccessfulness within the CU+CP group is defined by enhanced engagement of antisocial behaviour and consequences. This difference might be due to individual

characteristics and neuropsychological factors that may shape personal and professional achievements in life. Therefore, it is proposed that the CU-only group and CU+CP group differ in interpersonal characteristics (i.e. narcissism, Machiavellianism), temperamental and self-control factors (i.e. behavioural inhibition, sensitivity to punishment, impulsivity, activation control, attention, fear, inhibitory control, shyness), intellectual functioning (IF; verbal, nonverbal abilities) and executive functioning (EF; strategic planning, decision making, selective attention). The project is divided in three studies; each study aims to examine the above three areas (Figure 1). Each study will be presented separately, since they are based in different samples. A general discussion will also be provided at the end of the paper, combining the conclusion of all studies.

Based on the theoretical model of the project, the first aim (Study 1) is to establish whether CU-only youth engage in antisocial behaviour and consequences less than CU+CP, via semi-structured interview. The second aim (Study 1) is to examine whether CU groups use different types of aggression via a self-report questionnaire, explaining possible differences in their success of avoiding consequences. Study 2 aims to compare the identified groups in the different individual risk factors including temperament, self regulation and interpersonal characteristics. Adolescents and their mothers will complete youth- and parent-report questionnaires, respectively, measuring these individual characteristics. Last, the aim of Study 3 is to compare the identified groups in terms of executive and intellectual functioning, underlying mechanisms that reflect deficits in self-control and are associated with antisocial behaviour. These neuropsychological behavioural factors of EF and IF will be measured via computerized tasks.

The invited sample for the present project was selected from a previous longitudinal study's sample (see more in Fanti, 2013) of 1444 community adolescents from four districts in Cyprus (Nicosia, Larnaca, Limassol, Paphos). Fanti (2013) examined the development of different types of psychopathology based on the level of CU traits, measured via Inventory Callous Unemotional traits (ICU; Frick, 2004) and the level of CP via Youth Self-Report (YSR; Achenbach, 1991a; b; Roussos, Francis, Zoubou, Kiprianos, Prokopiou, & Richardson, 2001). Using Latent Profile Analysis in Mplus (Munthén & Munthén, 2010), 1444 adolescents were classified into five groups: Group 1 as 'low risk' youth (360 boys and 463 girls; 48.7% of the sample) scored below average on all indicator measures. Group 2 as 'average risk' youth (284 boys and 275 girls) scored at average levels on both CP and CU traits. Group 3 as 'LCP-HCU' (71 boys and 44 girls; 6.9% of the sample) were differentiated by low scores on CP and high scores on CU traits. Group 4 as 'HCP-LCU' (52 boys and 35 girls; 5.2%) were differentiated by high scores on CP and low

scores on CU traits. Last, group 5 as 'HCP-HCU' (68 boys and 22 girls; 5.4% of the sample) scored higher than the rest of the groups on both CP and CU traits (Figure 2). For the purpose of the present project, 250 adolescents from low risk (control), LCP-HCU (CU-only) and HCP-HCU (CU+CP) groups were selected, due to limited contact information.

Prior to inviting the participants, research assistants were trained to ensure a consistent administration of the tasks and practiced the protocol along with the project coordinators. Following this initial procedure, research assistants described the nature of the study to participating families over the telephone and invited those interested to participate. An informed parental consent and youth assent were obtained for the participants before any participation. All procedures were approved by the local Bioethics Committee as extension of the longitudinal study.

All measures were administered in the native language, Greek. Some of the measures were already available in Greek from previous research of the Developmental Psychopathology Lab, University of Cyprus. The majority of the measures followed forward- and back-translation to resolve any item-by-item ambiguities in linguistic or semantic content (Erkut, 2010; Maxwell, 1996). Translators were fluent in English and Greek. In addition to translating the measures, translators were asked to note items that did not translate well, were inappropriate for the participants, were culturally insensitive, or elicited multiple meanings and to suggest improvements. Coordinators and translators reviewed the discrepant items and made appropriate modifications.

The general research procedure included four parts: First, parent-report questionnaires were sent at the families houses for mothers to complete in their personal time. The time completion for parents' questionnaires lasted 40 minutes. Second, adolescents received an internet link and an ID code to complete the self-report questionnaire online and anonymously, and the administration lasted 30 minutes. Third, the research coordinator contacted the adolescents and interviewed them for 30 minutes via telephone. Fourth, computerized tasks were administered in individual interviews. Research assistants were present to monitor the participants' progress, reading aloud the instructions as each new task was presented and provided assistance as needed. Adolescents completed the computerized tasks in an average of 40 minutes. In order to increase the participants' motivation to perform well on the computerized tasks, they were told that they would receive €20 for participating in the study and that they could obtain up to €35, depending on their performance on the tasks. In reality all participants were paid €35 and no participants were penalized for their performance. The goal was for all the

individuals to complete all four assessments; however for those who completed some parts of the project, the payment for each part was €10. Overall, 149 families were accepted to participate in different studies of the project. Tables 1 and 2 show in detail the participants of each study and how many of them participated in all studies.

**Study 1: Establishing the success among youth high on Callous-Unaemotional traits with and without Conduct Problems**

Cleckley (1988) in his classic work “Mask of Sanity” proposed the idea of heterogeneity within psychopathy, by describing differences within individuals with psychopathy regarding their detection from the system (prison or hospital) and their successful careers or accomplishments (e.g. professional degrees in business, law or medicine). Thus, research has taken two approaches to differentiate individuals with psychopathic traits as successful and unsuccessful: The first approach defines success as managing to stay out of the criminal justice system/ hospitalization, or refrain from crimes and antisocial behaviors (Babiak, 1995; Gao & Raine, 2010). The second approach focuses on the successful life that these individuals tend to have, for example successful career, achievements or jobs and a successful social life-style (Babiak & Hare, 2006; Lykken, 1995; Mullins-Sweatt, Glover, Derefinko, Miller, & Widiger, 2010; Ullrich, Farrington, & Coid, 2008). Based on the downward extension of psychopathy to CU traits, Study 1 aims to examine whether individuals within the CU-only and CU+CP groups have similar successful or unsuccessful ways of adapting to the micro/ social system (i.e. society, family, friends, work) as successful and unsuccessful psychopaths do, respectively.

In order to do that, the present study follows the first approach of defining success, by measuring success based on ‘low occurrence of antisocial behavior and consequences’ within two different environments: School and society. The second approach ‘successful life’ cannot be measured similarly during adolescence, because successful career and life-style within school tends to be more subjective than objective, compared to successful life in a workplace. For example, Babiak and Hare (2006) described a male with successful psychopathy in a CEO position, who used his manipulative abilities in order to achieve it. That position puts the male subjectively under the category with successful career/ achievement. The definition of being a good student in school may get less subjective, since each of the participants may have a different idea on what does good student mean, for example a medium grade -16- could be good enough for one student, but not good enough for another student. Therefore, the present literature will be based on the first approach ‘successful low occurrence of antisocial behavior and consequences’, which has

also been proposed from previous studies (Gao & Raine, 2010; Mullins-Nelson, Salekin, & Leistico, 2006; Stevens, Deuling, & Armenakis, 2012).

### **Defining Success among Adults with Psychopathic traits**

Cleckley (1988) made it clear that not all psychopaths are criminals and not all individuals with psychopathic traits have a criminal record or have been institutionalized. The definition of successful psychopathy was first used for the individuals who display psychopathic traits but do not engage in antisocial behavior and deviant lifestyle (Babiak, 1995) or for those who remained undetected in the general population and avoided the prison or psychiatric hospital (De Matteo Heilbrun, & Marczyk, 2005). The little knowledge for this population (De Matteo, et al., 2005; Widom, 1977) led researchers to recruit community psychopathic participants who were not incarcerated or institutionalized, in order to increase the knowledge about successful psychopathy for producing or preventing the development of antisocial behavior (Kirkman, 2002).

The attempts for recruiting or locating individuals with psychopathic traits from the general population were attained via newspaper advertisements, flyers and posters. Widom (1977) measured success within individuals from the general population, examining the number of arrests, convictions, incarcerations, and the length of spending time in prison. She found that 35.7% of community psychopaths had never been arrested, and of those who had been, only the 17.9% had been convicted, proposing that unsuccessful psychopaths differ from successful psychopaths in the frequency of convictions and not arrests, since psychopaths from the general population could avoid extensive convictions.

Additionally, De Matteo et al (2005) examined success based on three measures of antisocial behavior: The total number of arrests, the number of arrests for crimes that satisfy violence risk assessment and the number of “sub-arrests” (i.e. the number of serious violence that did not result in an arrest). Almost half of the sample (41%) was not arrested (i.e. noncriminal subset), even though one-third of them reported engaging in serious violence. Among the criminal subset (i.e. arrested at least once), the number of arrests ranged from 1 to 24 ( $M=4.1$ ,  $SD=5.2$ .) and the number of serious violence arrests ranged from 1 to 3 ( $M=.4$ ,  $SD=.7$ ). What was surprising was that the noncriminal subset had more sub-arrests ( $M=6.2$ ,  $SD=21.9$ , range: 0-100) than the criminal subset ( $M=3.1$ ,  $SD=4.5$ , range: 0-20), suggesting that those who had never been arrested are more likely not only to avoid arrests but also doing more crimes than those who were arrested at least once for fewer crimes.

Similarly, Kirkman (2005) found that while male individuals, who were living for long periods in the community setting and did fraud-like offences, they still managed to

avoid prosecution. According to Cleckley (1988) fraud-like offences are being a feature of the crimes committed by successful psychopaths, and more specific by organizational/ corporate/ industrial psychopaths (i.e. individuals with psychopathic traits who succeed in managerial competencies, have high hierarchical positions and companies invest time and resources in order to make them successful future leaders; Babiak, Neumann, & Hare, 2010). Fraud-like-offences and white-collar crimes (e.g. embezzlement, stock manipulation, deceitful behavior toward co-workers) tend to be under the construct of indirect aggression (also called relational aggression; e.g. social exclusion, manipulating relationships, spreading rumors), which according to Coyne & Thomas (2008) is a kind of behavior that is frequently used by individuals with successful psychopathy, as it allows them to anonymously manipulate other people. Additionally, Gao and Raine (2010) suggest that successful psychopaths tend to use more covert and non violent methods, whereas unsuccessful tend to use a direct way of aggression, overt and violent methods, making it easier to be caught.

### **Defining Success among Youth with CU-traits**

Taken together, the ‘successful less incarceration or institutionalization’ among adult psychopathic population is determined as evade apprehension, escape law enforcement, get arrested but not convicted, avoid extensive conviction, have fewer convictions than arrests. However, this approach of success among youth needs to be determined, since no research has examined differences between youth with CU traits. Legislation and sanctioning concerning juvenile offending differs significantly between countries (Marttunen, 2008; e.g. Kimonis, Fanti, Frick, Moffitt, Essau, Bijttebier, & Marsee, 2014). In several countries youth delinquents can be incarcerated or sent to juvenile institutions or detention centers after violating society laws (e.g. Kimonis, Fanti, Goldweber, Marsee, Frick, & Cauffman, 2014; Kimonis et al., 2008). Specifically, in many U.S.A states, after adjudicating a juvenile as delinquent, a juvenile court may order incarceration as a penalty. Confinement comes in various forms: Home confinement/house arrest, placement with someone other than the parent or guardian, juvenile hall/ detention facility, probation after juvenile hall, secured juvenile facilities, adult jail and juvenile and adult jail. If the juvenile court judges discretion to apply a sentence or rehabilitation program, a disposition order may include verbal warning, fine, counseling, community service, electronic monitoring, and probation (Michon, 2014). Similarly, most of the European countries have juvenile court institution (Marttunen, 2008). For example, in England, Wales and the Netherlands, juvenile courts only deal with criminal law matters (Marttunen, 2008). Exceptions are the Scandinavian countries that use their child welfare

systems as replacement of juvenile courts (Dunkel, 2014; Marttunen, 2008). Additionally, in Germany and Switzerland, a moderate system of minimum intervention has been applied with sentencing options mainly given to diversion and educational measures (Dunkel, Grzywa, Horsfield, & Pruin, 2011; Marttunen, 2008).

In Cyprus, in an intention to modernize the criminal treatment of minors framework, a provision to the law that no young person shall be sentenced to imprisonment or incarceration after violating the law, especially if it can be properly addressed in a different way. If the Police deal with young offenders, they must first ensure that parents or guardians are informed. Based on the law, no minor can be arrested, except if there is a court order. If there is a court order, the young offender is brought before the court and will be released within eight days at most. After a young offender is found guilty from the court, the court has five options: 1) Reject the prosecution, 2) Set the supervision of the young offender under a guardian operator of Social Services, 3) Set the care of the young offender under a relative or other appropriate person, 4) Command the youth's parents or guardians to pay fine for damages or costs. If the previous options cannot be used, only then the court will 5) impose the imprisonment of the youth offender, which lasts no more than three months from the day of the arrest (Νόμος Τροποποιών τον Περί Αδικοπραγούντων Ανηλίκων Νόμον, Αρ. 94 του 1972; Appendix A). Therefore, success among youth in Cyprus will be defined based on these options of punishment; just a notice as the less than minor punishment, informed parents as the minor punishment and being incarcerated as the major punishment.

Babiak (1995) proposed that a better way to conceptualize an individual with successful psychopathy is to study psychopathy in industrial organizations. It seems that they can easily blend in and be disguised into a successful leader (Boddy, Ladyshevsky, & Galvin, 2010; Andrews & Furniss, 2009; Gudmundsoon & Southey, 2011), able to create organizational misbehaviors (e.g. fraud, stock manipulation, unnecessarily high job losses, environmental damage; Boddy, 2006). Due to the fact that human resources services are not trained to identify such individuals (Babiak, 1995), they consequently avoid any kind of incarceration or institutionalization. Therefore, it is appropriate to measure the 'successful low occurrence of consequences' of those with CU traits within the school environment as well, where youth spends most of their time. Measuring success within the school context will be through measuring the occurrence of punishment if there was a violation or occurrence of antisocial behavior. As mentioned before, this way could be used as a more objective criterion of success than youth's subjective opinion on their leadership skills and relationships ('success social life').

All schools in Cyprus follow the same rules for violations and each type of violation tends to have a specific punishment (Appendix B). Violation based on the school rules includes matters about education, students' appearance, general behavior in school, substance use or possession, vandalism or "offenses against property" (e.g. thief, forge, fire), possession of dangerous objects, and general offenses (e.g. verbal abuse, sexual harassment, bullying, physical abuse). If an adolescent gets caught violating school rules, the consequences vary from less than minor to major: Informal communication, note, rebuke, written agreement, rebuke and informing the parents, expel and informal communication, damage compensation, community school work, expel up to two days, warning parents for changing class, change class, expel plus damage compensation plus community school work, expel from school forever. Within the school context, success can be defined based on low occurrence of these punishments, which can be defined as minor and major punishment.

Furthermore, psychopathic groups seem to use different types of antisocial behavior; individuals with successful psychopathy tend to use more proactive and covert methods of aggression, whereas individuals with unsuccessful psychopathy tend to use more reactive and overt methods of aggression (Babiak & Hare, 2006; Gao & Raine; 2010). According to previous reviews these different methods could be a benefit for individuals with successful psychopathy in order to cover their violations more easily. Therefore, the present study aims to examine the types of aggression that CU groups use. Research has shown that aggression is deconstructed into two functions, proactive (i.e. planned, and "cold-blooded" use of aggression to attain goals and rewards) and reactive (i.e. hostile, defensive, retaliatory, and impulsive, often an angry response to provocation, frustration or threat), and two forms, overt (i.e. physical aggression, harms others by damaging their physical well-being, and includes acts of physical; e.g., hitting, slapping, kicking; and verbal; e.g., name calling, expletives) and relational (i.e. subtle, covert, or direct, and refers to damaging social and peer relationships through such avenues as rumor spreading, threats to withdraw friendship, and intentional group exclusion) aggression (Artz, Nicholson, Magnuson, 2008; Coie & Dodge, 1998; Crick & Dodge, 1996; Crick & Grotpeter, 1995; Poulin & Boivin, 2000).

Fanti, Frick and Georgiou (2008) found that those with high CU traits engage in both proactive and reactive aggression. Additionally, Munoz et al. (2007) found that CU traits did not differentiate between youth with proactive and reactive aggression compared to those with reactive aggression only. Frick et al (2003b) compared CU groups on aggression functions and found that youth with CU+CP were more likely to show higher

levels of proactive and reactive aggression than those with CU-only. These studies on forms of aggression show that the differences between groups are still unclear in the literature, which suggests the need for examining aggression between CU groups. On the other hand, literature in psychopathy suggests that individuals with successful psychopathy have more indirect and covert aggression to others, and probably that is what makes them successful in the first place. This could be a perspective on how youth with CU-only work as well. For example, since they are able to avoid any CP, it is more possible to use more covert and relational aggression ways to others.

### **Overview of Study 1**

The aim of Study 1 was to examine the term of success within the CU groups; whether the CU-only group differentiates from the CU+CP group in separate functions of success, presented in two parts: Part 1 aimed to examine whether CU groups differentiate on the level of violations against school and society's rules, and the occurrence of major punishment. The occurrence of violations against schools and society's rules and the occurrence of punishment will be measured, using an interview assessment for success among adolescents, which was developed for the purposes of Study 1. Only youth with CU traits were interviewed, since the present phase aims to specify the differences in terms of success between the CU groups only and not compared to the general population. Based on prior research, it was predicted that youth within the CU-only group will have more successful behaviours in school and society, as indicated by less violations. In the case they engage in any rule violations, they were expected to have less punishment. In contrast, it was expected that youth within the CU+CP group will have more unsuccessful behaviours in school and society, which means a) more antisocial behaviour, and when they express their antisocial behaviour, b) they will have more possibilities to get punished.

Part 2 aimed to examine the occurrence of different forms and functions of aggression, by measuring via a self-report questionnaire. Besides youth within the CU groups, youth within the control group were also invited, in order to have baseline data to compare the results of those with CU traits. It was expected that the CU-only group will use less overt and reactive aggression, more relational aggression and similar proactive aggression to the CU+CP group. Additionally, it was hypothesized that the CU+CP group will use more overt and reactive aggression, less relational aggression and similar proactive aggression to the CU-only group. Compared to both CU groups, it was expected that youth in the control group will use less overt, reactive, relational and proactive aggression.

## Methods of Study 1

### Participants

In Part 1, 43 participants (32.6% females; *Mage* = 15.58) with CU traits agreed to be interviewed; 22 individuals (51.2%; 31.8% females; *Mage* = 14.95) were in the CU-only group and 21 individuals (48.8%; 33.3% females; *Mage* = 16.23) were in the CU+CP group. The data in Part 2 were taken from the online self-report questionnaire that the participants answered anonymously, before the research coordinator interview them. Out of 158 individuals, 54 adolescents (50% females; *Mage* = 15.59) completed the self-report questionnaire on aggression types; 13 were in the control group (24.1%; 92.3% females; *Mage* = 15.92), 22 individuals (40.7%; 36.4% females; *Mage* = 14.86) were in CU-only group, whereas 19 individuals (35.2%; 36.8% females; *Mage* = 16.21) were in the CU+CP group.

### Measures

**Contact with authorities** was measured via a social semi-structured interview developed by members of the Developmental Psychopathology Lab, trained professionals and graduate students in different focus groups. The questions were based on literature and criteria of successful psychopathy, incarcerated juvenile offenders and the coding scheme of the Hare Psychopathy Checklist-Revised (PCL-R; Hare, 2003): Avoid engaging in criminal behaviour, contact with justice (De Matteo et al., 2005) or detection by the law (Mullins-Nelson et al., 2006), got arrested but not convicted, avoided extensive convictions, higher frequency of arrests than convictions (Widom, 1977), types of offenses by incarcerated youth. These terms of success were adapted to develop a questionnaire measuring success among youth. The questions were related to (1) if an individual got caught for doing something against the rules in school and against the laws of society, (2) if an individual did something against the rules in school and against the laws of society, but did not get caught, and (3) if an individual did something against the rules in school and against the laws of society, got caught but did not have consequences. Appendices C and D show the questions that were used for the social semi-structured interview.

All the participants' answers were transcribed (see sample in Appendix E). A thematic analysis was used to create the variables of offenses and consequences with school or society's authority. Thematic analysis is an analytic method that employs thematic coding (Braun & Clarke, 2006), which aims to identify, analyse and report patterns within qualitative data. Based on Thematic Analysis, first the researcher must be familiarised, then generate initial codes, search for themes, review the themes, define and name the themes, and write the analysis. For the present study, first there was a

familiarization with the data; then each participant's sentence was generated to initial codes. For example, in the question "Did you do anything against the school laws that you were punished?" and the answer was "Yes, I did a lot of offenses", then the participant would mark as a 'yes' code for violating school's rules. Participant's answer regarding the kind of offenses he or she committed was also coded, for example "I left class because I was bored" was coded as 'Left class'. After generating initial codes, the initial codes were combined under themes. For example, 'Left class', 'Stayed outside the class' and 'Late for class' were under the same theme name 'Truancy'. After reviewing the themes it changed to 'Behaviours in resistance to attendance, appearance and general behaviour' and then to 'Nonattendance behaviours', which is consistent with what is described in the school violations (Appendix B). The same procedure for objective strategy was conducted regarding the themes of consequences. Appendix F shows the process of thematic analysis of the 14 thematic categories of offenses in school: 1) Nonattendance behaviours, 2) behaviours falsification of school's documents, 3) behaviours of not seemly apparel on clothes, 4) behaviours of not seemly apparel on body/hair, 5) behaviours inhibiting smooth course conducted, 6) behaviours in resistance to rules about cell phones, 7) smoking, 8) malicious damage to property, 9) graffiti, 10) arson, 11) theft, 12) possession of dangerous items, 13) verbal abuse, 14) physical abuse. Appendix G shows the process of thematic analysis of the 11 thematic categories of offenses in society: 1) Theft, 2) behaviours against the law of safety driving, 3) behaviours against the law of clubbing, 4) behaviours against the law of drugs, 5) malicious damage to property, 6) arson, 7) property violation, 8) graphite, 9) oppositional/ defiant behaviours, 10) physical abuse, and 11) possession of dangerous items.

Measuring outcomes were a) if they did something against the school or society rules (1=yes, 0=no), b) if they had contact with the school or society's authority (1=yes, 0=no), c) what happened with the society's authority (0=avoid before busted, 1= busted by society's authority), d) what kind of contact they had with school or society's authority (0=less than minor punishment, 1=minor punishment, 2=major punishment), e) a combination of the previous outcomes (0=they did nothing against the school or society rules, 1=they did something against the school or society rules but avoided consequences, 2= they did something against the school or society rules but they had minor consequences, 3= did something against the school or society rules but they had major consequences), f) the amount of types of offenses they did against school and society rules. The lower scores indicate greater success. A punishment was labelled as minor or major based on the overall punishments in the sample. Taking into consideration the responds of the whole sample,

within society system, the minor punishment was indicated as a warning (“They wrote my name down”, “They let my parents know”, “They called my parents”) and a major punishment was indicated as taken more than just a warning (“We paid fine”, “They put us in the Police car”, “They took me to the Police Station”). Within school system, the minor punishment was indicated as a warning (“She noted me as absent”, “The teacher did not let me enter the classroom”) and a major punishment was indicated as expel (“The teacher had me expelled”, “I had too many expulsions, that I stayed in the same class for two years”). Correlation analysis showed that average CP and CU traits of the sample were not significantly correlated with the measuring outcomes of the interview for the society context. For the school context, the kind of contact (0=less than minor punishment, 1=minor punishment, 2=major punishment) showed positive correlations with the average CP ( $r=.351, p=.039$ ) and the average CU traits ( $r=.494, p=.003$ ), while the rest of the measuring outcomes were not correlated.

**Types of aggression** were measured with the Peer Conflict Scale (PCS; Marsee and Frick, 2007), a 40-item self-report scale. PCS includes 20 items assessing proactive aggression and 20 items for reactive aggression. Proactive and reactive items are grouped in 10 overt and 10 relational aggression items. Proactive overt items includes aggression for gain and dominance reasons (e.g. “I start fights to get what I want”), whereas proactive relational includes unprovoked and premeditated aggression (e.g. “I gossip about others to become popular”). On the other hand, reactive overt aggression measures angry and impulsive aggression (e.g. “When someone hurts me, I end up getting into a fight”), whereas reactive covert measures refer to emotional provocation (e.g. “If others make me mad, I tell their secrets”). Items are rated on a 4-point scale (0 = *not at all true* to 3 = *definitely true*) and the two subscales (proactive and reactive aggression), as the four sub-subsubscales (proactive overt and relational aggression, reactive overt and relational aggression) are calculated by summing the items. Prior research supports the factor structure of the PCS (Marsee, et al., 2011; Marsee & Frick, 2007). In the current study, coefficient alphas for each scale were good:  $\alpha = 0.82$  for proactive overt, 0.80 for proactive relational, 0.89 for reactive overt, and 0.79 for reactive relational, which were similar to other samples, with alphas ranging from 0.76 to 0.83 for proactive overt, 0.77 to 0.81 for proactive relational, 0.86 to 0.88 for reactive overt, and 0.77 to 0.81 for reactive relational (Marsee et al., 2011). Correlation analysis showed that average CP and CU traits of the sample were significantly correlated with the types of aggression. All types of aggression, besides Reactive-Relational aggression, were positively correlated with the average CP

( $r=.285-.487$ ,  $p=.037-.000$ ), whereas all types of aggression were positively correlated with the average of CU traits ( $r=.385-.527$ ,  $p=.008-.000$ ).

### **Plan of Analysis**

**Part 1.** In Phase 1, the aim was to test if the identified groups (CU-only, CU+CP) differed in terms of their success in evading consequences in school and society. Using the IBM SPSS 20.0, Chi-square tests of independence were conducted, in order to test the cross-tabulation between the CU- groups and the types of contact with i) school authorities: a) if they did something against the school rules (yes or no), b) if they had any contact with authorities (yes or no), c) the kind of their contact-if any (received less than a minor punishment, received a minor punishment, received a major punishment), d) combination of the previous categories (they did something against the school rules, they did something against the school rules and avoided the consequences, they did something against the school rules and received a minor punishment, they did something against the school rules and received a major punishment). Additionally, for ii) society authorities: a) if they did something against the society rules (yes or no), b) if they had any contact with authorities (yes or no), c) the kind of their contact if any (received less than a minor punishment, received a minor punishment, received a major punishment), d) combination of the previous categories (they did something against the school rules, they did something against the school rules and avoided the consequences, they did something against the school rules and received a minor punishment, they did something against the school rules and received a major punishment). Additionally, Independent Samples T-Test was conducted to examine the differences between the amount of offenses' types across the CU-only and CU+CP groups in the school and the society.

**Part 2.** In Phase 2, the aim was to test if the identified groups (control, CU-only, CU+CP) differed on the self-report questionnaire measuring types of aggression, PCS. Using the IBM SPSS 20.0, Univariate ANOVAs were conducted, with the three groups as the independent variable and the types of aggression as the dependent variables. Along with Bonferoni post-hoc comparisons, standardized mean difference effect sizes (Cohen's  $d= .20$  small,  $d=.50$  medium,  $d=.80$  large; Cohen, 1992) are reported in text to explicate interaction effects.

## **Results of Study 1**

### **Part 1**

**School system.** A chi-square test of independence was performed to determine the success between the CU-only and CU+CP groups in the school system. As reported in Table 3, the CU-only and CU+CP groups were different according to if they were involved

in behaviours against school rules,  $\chi^2 (1, N=43) = 4.21, p < .05$  (fisher's  $p=.059$ ). Adolescents in the CU+CP group are more likely to violate at least one school rule (100%) than adolescents in the CU-only group (81.8%). Additionally, a significant interaction was found comparing the frequency of CU groups' contact with the school's authority,  $\chi^2 (1, N=43) = 9.35, p < .01$  (fisher's  $p=.002$ ). CU+CP youth had more contact with school authorities (95.2%), whereas CU-only youth had less contact with school's authority (54.5%). Regarding the kind of their contact with school authorities, CU groups were not significant different,  $\chi^2 (2, N=43) = 1.038, p = .595$ . Both groups had similar kinds of contact, especially in less than minor (CU-only 41.7%, CU+CP 30%) and minor punishment (CU-only 16.7%, CU+CP 10%). While the CU+CP group reported more major punishments (60%) than CU-only youth (41.7%), no significant differences were found. In general, the CU-only group (22.7%) was more successful than the CU+CP (57.1%), based on the absence of antisocial behaviour and their avoidance of punishment in school,  $\chi^2 (2, N=43) = 7.752, p = .051$  (linear by linear association 1,  $N=43, \chi^2 = 7.025, p=.008$ ). A t-test was also conducted to examine the differences between the amount of offenses' types across the two groups, showing that the CU-only group ( $N = 22, M = 2.18, SD = 1.62$ ) had fewer amount of violations against school rules in contrast to the CU+CP group ( $N = 21, M = 4, SD = 1.52$ ),  $t(41) = -3.79, p < .01$ .

**Society system.** A chi-square test of independence was performed to examine the successfulness between the CU-only and CU+CP groups within the society. As reported in Table 4, there was a significant difference between groups regarding the occurrence of antisocial behaviour in the society,  $\chi^2 (1, N=43) = 6.78, p < .01$ , whereas youth in the CU+CP group were more likely to answer yes (61.9%) than those in the CU-only group (22.7%), showing their successful way of evading antisocial behaviour. Comparing the two groups regarding their contact with the society's authority, a significant interaction was reported,  $\chi^2 (1, N=43) = 4.24, p < .05$  (fisher's  $p=.04$ ), whereas CU-only youth had less contact with authorities (18.2%) compared to the frequency of those with CU+CP (47.6%). In general, the CU-only group was more successful than the CU+CP group, based on the absence of antisocial behaviour and their avoidance of punishment in society  $\chi^2 (3, N=43) = 4.76, p = .190$  (linear by linear association 1,  $N=43, 3.60, p=.058$ ). In more detail, adolescents in the CU-only group were less likely to engage in any society violations (77.3%), while none of them engaged in any major punishment (0%). Additionally those with CU+CP were more likely to engage in society violations and receive punishment (9.5-14.3%). A t-test was conducted to examine the differences between the amount of offenses' types across the two groups, showing that the CU-only group ( $N = 21, M = .67,$

$SD = 1.32$ ) had the same amount of violations of society rules as the CU+CP group ( $N = 21, M = 1.19, SD = 1.47$ ),  $t(40) = -1.22, p = .23$ .

## Part 2

**Types of aggression.** Table 5 shows findings from the Two-Way ANOVA comparing the identified groups based on youth's reports of aggression. Findings indicated that youth with CU+CP use more Reactive Overt Aggression,  $F(2, 51) = 7.323, p \leq .01, \eta^2 = .223$ , compared to CU-only ( $d=.83, p=.042$ ), and Control ( $d=1.38, p=.002$ ). Additionally, the interaction between CU traits and CP in Reactive Aggression,  $F(2, 51) = 5.480, p \leq .01, \eta^2 = .177$ , showed that Control group uses less reactive aggression than CU-only group ( $d=.58, p = .36$ ) and CU+CP group ( $d=.65, p=.006$ ), but also that youth with CU-only uses less than CU+CP group ( $d = .65, p = .15$ ), based on medium effect sizes. Regarding Overt aggression, there was a main effect of groups,  $F(2,51) = 5.842, p \leq .01, \eta^2 = .186$ , whereas Control group scored lower than CU-only group ( $d=.56, p=.39$ ) and CU+CP group ( $d=1.25, p=.005$ ), whereas also youth with CU-only seems to be less overt aggressive than CU+CP group ( $d= .70, p=.111$ ), as indicated by moderate and large effect sizes.

No main differences were found between groups on Proactive Overt Aggression,  $F(2, 51) = 2.913, p = .063, \eta^2 = .103$ , on Proactive Relational Aggression,  $F(2, 51) = 1.889, p = .162, \eta^2 = .069$ , on Proactive aggression,  $F(2, 51) = 2.431, p = .098, \eta^2 = .087$ , on Reactive Relational Aggression,  $F(2,51) = 2.116, p = .131, \eta^2 = .077$ , and on Relational Aggression,  $F(2,51) = 2.206, p = .121, \eta^2 = .080$ . This suggests that the level of CU or CP doesn't differentiate their type of aggression. Extra analyses indicated that Control group scored lower than CU groups based on medium to large effect sizes ( $d = .47 - .89, p = .13-.97$ ) Importantly, findings also showed that CU-only group may use less in Proactive Overt Aggression than CU+CP group ( $d=.42, p=.61$ ), based on medium effect sizes.

## Discussion of Study 1

The purpose of Study 1 was to examine the differences in success within the CU groups. Specifically, it was examined whether the CU-only group differentiates from the CU+CP group on the occurrence of a) violations against school and society's rules, b) major punishment, and c) forms and functions of aggression. Results of the present study provides evidence that CU youth high on CP differentiated from CU youth low on CP in their ability to successfully engage in less punishment, pointing to the importance of heterogeneity within CU groups: Adolescents in the CU-only group were characterized by a more successful pattern of behaviors compared to CU+CP group. This pattern included youth with CU-only engaging less in violations and punishment in both school and society compare to youth with CU+CP. Additionally, they use less overt and reactive aggression

than youth in the CU+CP group. While these findings support the heterogeneity within CU traits, they also suggest the importance of downward extending the subtypes of successful/unsuccessful psychopathy to adolescents. The similarity of low engagement in antisocial behavior and consequences between adults with successful psychopathy and youth in the CU-only group provides important information on the developmental continuity of CU traits to psychopathy. This theoretical information may additionally contribute to suggestions or improvements of preventing the development of CU traits and psychopathy before characteristics solidify to permanent personality traits (Caspi & Bem, 1990).

### **Low Occurrence of Violations and Punishment**

Results showed that although the CU-only group scored low on CP, it seems that other violations (i.e. driving before the age of 18, disinterest to the lesson), which were asked only via the present semi-structured interview, were identified. However, it is important to clarify that results showed that it is more likely for CU-only youth to evade violating behaviors compared to CU+CP youth, since all the adolescents with CU+CP engaged in at least one violation within the school setting. Additionally, from those with CU-only who violated the school's rules, half of them avoided any kind of punishment (minor or major), while only one-third of youth in the CU+CP group violated the school rules and avoided punishment. Important differences were also shown between the groups regarding their punishment due to their violations: One-tenth of both CU-only and CU+CP groups admitted that they violated school's rules and had a minor punishment as consequence of their actions. However, more than half of the CU+CP youth who violated school rules and were punished with major consequences, whereas only one-fifth of the CU-only youth violated school rules and were punished with major consequences. Similar differences between groups were found regarding the violations of society's rules. Most of youth in the CU-only group were able to refrain from violating any society's rules, whereas half of the CU+CP group violated society's rules. Moreover, from those with CU-only who engaged in some violation, managed to avoid or have a minor punishment instead of a major one.

Examining both contexts (school and society), in which youth spend the majority of their time, sheds a light on differences within youth with CU traits regarding their antisocial behaviours and their ways of handling the consequences of their behaviours, across different times of day. As was predicted, most youth in the CU-only group demonstrated a successful way of refraining from violations and avoiding major punishment, whereas most youth in the CU+CP group demonstrated an unsuccessful way

of refraining from violations and avoiding punishment. Although these findings were verified in both contexts at some point, it is important to note that the combined results were not so clear within the society context, compared to the school setting. This could suggest that it is easier to identify successful outcomes of CU youth within the school setting instead of the society, perhaps due to the differences of consequences across settings.

Moreover, differentiating youth with CU traits on the level of their CP provides additional information on other differences within CU traits, contributing to the theory of heterogeneity. For example, the fact that youth with CU-only have low level of CP makes them more prone to have less delinquency (i.e. their behavior outside of school) and more possibilities on avoiding punishment. The distinction of youth with CU traits regarding their behavior and skills of avoiding suggests different developmental risk factors within CU traits. In addition to that, Fanti, Panayiotou, Lazarou, Michael, & Georgiou (2015) found that CU-only youth showed similar startle reactivity to fear imagery scenarios to youth in the control group, than to the CU+CP youth, proposing that different levels of fear may be reflected within youth with CU traits. Also, the absence of fear-potentiated startle seems to be explained by reduced amygdala activity (Blair, 2001), and literature shows that youth with CU+CP report reduced amygdala activity to fearful faces in children with CU+CP, compared to control group (Jones, Laurens, Herba, Barker, & Viding, 2009; Marsh et al., 2008; Viding et al. 2014). Consequently, reduced amygdala activity seems to affect the social judgment of youth (Viding & Kimonis, under review), for example whether a behavior is legal or illegal (Marsh et al., 2011) or whether youth will make a decision regarding others' distress (Sebastian et al., 2012). Taken together, it is reasonable to hypothesize that different processing of fear within youth with CU traits may explain the differences between CU groups in evading antisocial behavior or punishment. For example, it might be easier for youth with CU-only, perhaps with a more normative processing of fear, to process a situation or a behavior as illegal and take precautions by avoiding getting capture or busted. Importantly, these findings provide evidence for the importance of taking CU traits heterogeneity into account and contribute more to the efforts of identifying behavioral, individual and neuropsychological markers to explain heterogeneity in CU traits.

Furthermore, the present findings propose a possible resemblance between youth within CU groups (CU-only, CU+CP) and individuals within psychopathy groups (successful, unsuccessful), regarding evading antisocial behavior and punishment, as was defined from previous studies (e.g. Widom, 1977). Firstly, both youth with CU-only and

individuals with successful psychopathy are able to avoid serious consequences, possibly due to similar developed abilities that help them succeed on planning ahead. At the same time, youth with CU+CP and individuals with unsuccessful psychopathy seem to have resembling deficits that makes them more vulnerable to get caught by authorities. In fact, it has been proposed that individuals with successful psychopathy have enhanced neurobiological functioning that underlies their cognitive functioning, and unsuccessful psychopaths have functional impairment that underlies their cognitive and emotional deficits (Gao & Raine; 2010). Moreover, it has been found that incarcerated individuals with psychopathy show less amygdala activation when performing an emotional memory task (Kiehl et al., 2001). These providing findings in psychopathy suggest that similar underlying risk factors may occur between psychopathy and CU traits. These similarities between CU traits and psychopathy come to support theories that CU traits are a precursor of psychopathy and may provide evidence on the developmental continuity of CU traits to psychopathy. This could be worth studying more among CU groups and psychopathy, in order to find similarities or differences in characteristics and abilities, which may be targeted for therapeutic interventions or prevention.

**Number of violations' types.** Furthermore, findings showed that the CU-only group had fewer amount of types of violations within school but similar amount within society compared to the CU+CP group. The fact that youth with CU-only do not react similarly across context compared to youth with CU+CP, provides information in multiple levels. Firstly, having fewer types of violations indicates a successful way refraining from antisocial behavior, compared to what youth with CU+CP do, while it supports the theory of heterogeneity within CU traits. Secondly, the fact that fewer amount of violation types occur especially in school context in contrary to society, suggests that the context and where an adolescent with CU traits is plays an important role on whether he will behave antisocially. It is important to note that in the school context, the rules are more specific and authorities are more frequent compared to the society context. The possibility that youth with CU-only evade more violation types due to the higher possibilities of getting punished could support the hypothesis of a more normative processing of fear compared to those with CU+CP. Findings within psychopathy literature show that individuals with successful psychopathy (i.e. few arrests) can have more violations than individuals with unsuccessful psychopathy (De Matteo et al., 2005), proposing possible similarities between the CU/psychopathy groups that needs further investigation.

### **Types of Aggression**

Moreover, the present study aimed to investigate the types of aggression within CU traits, which contributes to identification of more heterogeneous CU groups differentiated on the level of CP. As was predicted, it was reported that the CU-only youth scored lower on reactive-overt, reactive and overt aggression than the CU+CP group. They also scored lower on proactive-overt aggression than CU+CP group but not on proactive aggression. The first findings propose that youth with CU-only tend to use less physical and verbal aggressive behavior to harm others (e.g. hitting, pushing, kicking, and threatening others; Coie & Dodge, 1998). They also show less reactive aggression than the CU+CP group, suggesting that they are less likely to use angry responses to provocation (e.g. Berkowitz, 1993). Studies showed that adolescents who tend to be more reactive or overt in their aggressive behaviors have also high levels of impulsivity (Forth & Flight, 2007; Raine et al., 2006). Indeed, studies showed that different levels of impulsivity exist across CU groups (Fanti, 2013) and it is reasonable to suggest that this different levels of impulsivity may be a risk factor for different engaging in reactive and overt forms of aggression across CU groups.

Furthermore, findings showing that CU-only and CU+CP groups have similar engaging in proactive aggression are consistent with previous studies (e.g. Frick et al., 2003b). It is possible that the use of goal-directed aggression for instrumental gain or dominance over others may be part of the manipulation that is a defining characteristic of CU traits (Fanti et al., 2009; Forth & Flight, 2007; Raine et al., 2006). The fact that the CU-only group engages in well planned and goal directed aggression, can be considered as a possible factor that protects them from getting caught. Perhaps having the ability of planning ahead an aggressive behavior helps eliminate other dangerous cues that could get them caught or punished. The findings that the CU+CP youth use both functions of aggression (reactive and proactive) are also consistent with previous findings (Fanti et al., 2009; Munoz et al., 2008), but differently regarding CU-only group (Munoz et al., 2008) suggesting further investigation on CU groups. Taken together, proactive aggression can be found in both CU groups while reactive aggression can be found mostly in CU+CP group, providing more evidence for explaining the heterogeneity within CU groups.

Moreover, in the adult psychopathy literature, Gao & Raine (2010) proposed that individuals with successful psychopathy, due to their low levels of impulsivity, tend to use more covert and nonviolent methods to achieve their goals. In the contrary, unsuccessful psychopaths, who score high on impulsivity, use more overt violent offending and therefore they are more likely to get caught. Additionally, it was suggested that fearless dominance was associated with proactive aggression, supporting the idea that individuals

with psychopathy are more instrumental and goal directed in their aggressive behavior (Cima & Raine, 2009). Consequently, this also supports the idea that proactive aggression is associated with the affectivity of CU traits (e.g. lack of empathy, shallow emotions; fearlessness), while reactive aggression is more associated with impulsivity (Marsee & Frick, 2007). Taken together, it seems that CU groups show multiple resemblances to psychopathy groups in aggression types and risk factors that could be used as support for the developmental continuity theory of CU traits to psychopathy.

What was surprising was that youth with CU-only and CU+CP seem to react similarly concerning relational aggression, which contradicts prior evidence among individuals with psychopathic traits (e.g. Fanti, 2013). Although no experimental studies have examined this, review papers or novel (e.g. Babiak & Hare, 2006) have described that successful psychopaths or industrial psychopaths use relational aggression to gain power and dominance by damaging social relationships, excluding target people from a group, as Dave handled Frank and lost his job - the main characters of the book "Snake in Suits". A possible explanation is that relational aggression, which measures manipulation of peer relationships (e.g. threatening to terminate friendship, excluding from group), seems to be a major contribution for higher perceived popularity among youth (Puckett, Wargo Aikins, & Cillessen, 2008), suggesting that relational aggression may not differentiate among high CU youth. Another possible explanation is that relational aggression can be used for subtle and covert tactics to get what they want, and since all of the participants are still in school, perhaps it is a skill that both CU groups may need, disregarding the level of CP.

### **Conclusions of Study 1**

Current findings point to the importance of taking heterogeneity into account concerning the different ways (successful and unsuccessful) of CU groups approach antisocial behaviour and punishment. It is possible that different risk/ protective factors differentiate those with successful from those with unsuccessful pattern of behaviour. For example, it was suggested that manipulation, low impulsivity and high executive function give to individuals with successful psychopathy the ability to refrain from antisocial behaviour or overt antisocial behaviour, evade apprehension and avoid extensive convictions (Gao & Raine, 2010). Since the present findings are consistent with findings within psychopathy literature, proposing a resemblance between CU groups and psychopathy, it is appropriate to suggest that heterogeneity within CU groups could be developed due to underlying mechanisms or individual characteristics. Examining the success within CU groups and their types of aggression provides important theoretical evidence leading to avenues for future work within CU groups, while a further

investigation on this matter may have important impact on understanding the heterogeneity within CU traits.

Further, these findings have implications for theoretical perspectives on CU traits and psychopathy, pointing to developmental continuity, while protective factors can provide information for therapeutic applications over CP. Firstly, downward extending findings on differences between psychopathy groups may help document the developmental continuity of differences within CU groups, understanding and conceptualizing youth and adult antisociality. Secondly, further conceptualization of heterogeneity within CU traits may constitute potential treatment targets, for example low impulsivity, in order to elucidate developmental paths that lead to adult antisociality.

### **Study 2: Conceptualizing the CU-only Group in Regulation Control, Temperamental and Interpersonal Characteristics**

According to Gao and Raine's (2010) neurobiological model for heterogeneity within psychopathy, it is proposed that differences in brain and physiology functions, which are associated with the fearless temperament, are responsible for leading individuals with psychopathy to be incarcerated or not. Additionally, Loving (2002) proposed that heterogeneity within psychopathy may be due to the different levels of psychopathy factors (F1 and F2), especially characteristics as impulsivity and interpersonal skills. Similarly to these risk factors towards the development of psychopathy, it is proposed that CU+CP youth tend to behave in a severe pattern of CP due to their fearless temperament, impulsivity and narcissism (e.g. Frick & Morris, 2014; Frick & White, 2008). This statement leads to limited information for CU-only group, which experience lower CP than CU+CP group. Therefore, the current study aims to test a variety of individual characteristics, suggesting distinct risk factors between groups. These findings can contribute to the literature on the risk factors related to CU traits rather than to CP or antisocial behavior in general. In order to examine this hypothesis, Study 2 aims to provide evidence for differences in temperamental characteristics (i.e. sensitivity to punishment and reward, behaviour inhibition and activation, fear, shyness), regulatory dyscontrol characteristics (i.e. attention, inhibitory control, activation control, impulsivity) and interpersonal characteristics (i.e. narcissism, Machiavellianism), among individuals with CU traits differentiated in levels of CP.

#### **Temperamental Characteristics**

Different theories have been proposed around fearless temperament (e.g. Gray, 1970; Lykken, 1957) for understanding the nature and the development of psychopathy. Lykken proposed the low-fear hypothesis, in which individuals with psychopathic traits

have deficits in emotional reactivity, meaning poor fear conditioning and thus failure to inhibit responses that might be punished. Moreover, failure of moral socialization is based in individuals' disability to process sadness and fear of others, engage in empathy and disrupts emotional learning processes (Blair, 2006; Fowles & Kochanska, 2000), which is now understood as an amygdala's dysfunction (Blair, 2006). Deficits in emotional arousal to fear and distress in others creates abnormalities in their responses to cues of punishment and danger, leading them to increased reward-seeking or/and antisocial behaviours (Blair, 2006). In addition, Fowles (1980, 2006) applied Gray's (1970) theory of Behavioral Inhibition System (BIS; i.e. an anxiety system that functions to inhibit goal-directed action and avoid negative, painful, or threatening outcomes in the presence of aversive stimuli or punishment) and Behavioral Activation System (BAS; i.e. a system that activates approach behaviour to cues for rewards or avoidance of threatened punishment) in the concept of psychopathy. Furthermore, Fowles (1980, 2006) proposed that these individuals tend to have BIS deficits and a normal or very strong BAS, developing a low responsiveness to punishment (Dadds & Salmon, 2003; Torrubia, Avila, Molto, & Caseras, 2001).

It has been suggested that a temperament-based dual-process pathway can also be adjusted for CU traits, whereas CU traits can be related to interpersonal and affective facets of psychopathy and the low-fear pathway (Frick & Morris, 2004; see Frick & White, 2008 for review). Several studies have shown that youth with CU traits display insensitivity to punishment, especially once a reward-oriented response set was formed (e.g. Barker, Oliver, Viding, Salekin, & Maughan, 2011; O'Brien & Frick, 1996; Frick et al., 2003b), indicating that youth with CU traits also have weak BIS and normal BAS (see Dadds & Salmon, 2003 for review). Frick et al. (2003b) found that even though the CU-only group showed a non-significant higher score in reward dominance than the CU+CP group, both groups showed elevated reward dominance. On the other hand, Fanti et al. (2015), using behavioural and physiological measures, found that youth in the CU+CP group are more fearless than CU-only group, for example scored lower in sensitivity to punishment and BIS compared to those with CU-only. Taken together, it seems that CU traits are associating with fearless temperament and specifically with the reward-dominant response style, especially when youth with CU traits displays a higher level of CP. For examining this hypothesis, groups will be compared in questionnaires that measure BIS/BAS and sensitivity to punishment and reward, in order to meet the study's need for holistic idea of fearless temperament.

Psychopathy and CU-traits have also been associated with sensation seeking and high pleasure (Barry et al., 2000; Blackburn, 1969; Essau, Sasagawa & Frick, 2006; Frick

et al., 2003b). It has been suggested that these preferences for novel and dangerous activities are consistent with their fearless temperamental style (Rothbart & Bates, 1998) or behavioural inhibition (Kagan, Reznick, & Snidman, 1987). These preferences can be conceptualized by the developmental cluster of surgency (e.g. positive affect/ surgency, fear and shyness), which is characterized by high activity level, high intensity pleasure seeking and low shyness (Ellis & Rothbart, 1999). For the purpose of the present study, the identified groups will be compared in the cluster of surgency with the Early Adolescent Temperament Questionnaire (Ellis & Rothbart, 1999). Differentiating CU groups on these characteristics will help conceptualize the differences on sensation seeking style that is complimentary to the fearless temperament of youth with CU traits.

### **Regulation Control**

Besides fearless temperament, regulatory control is proposed as responsible for heterogeneity in psychopathy (Gao & Raine, 2010). The present study examines deficient regulation control between CU groups, interpreting it as a construct of impulsivity or effortful dyscontrol (i.e. one's ability to inhibit proponent courses of action; Logan, Schachar, & Tannock, 1997), which is distinguished from the temperamental behaviour inhibition associated with the low-fear hypothesis (Gray, 1991). Impulsivity can be defined as "a swift action without forethought or conscious judgment, behavior without adequate thought, and the tendency to act with less forethought than do most individuals of equal ability and knowledge" (Moeller, Barratt, Dougherty, Schmitz, & Swann, 2001, p. 1783). Additionally, effortful dyscontrol was described as the disability to utilize attentional resources and inhibit behavioural responses to regulate behaviours and emotions (Rothbart & Bates, 1998).

It was found that individuals high on impulsivity tend to score high on criminal behaviour and are more likely to be imprisoned (Newman et al., 2005). In addition, impulsivity is a core feature of the antisocial psychopathic domain and consequently is more associated with antisocial and behavioural facets of psychopathy than the affective and interpersonal domains of psychopathy (Hare, 1991). More specific, it has been established that individuals with unsuccessful psychopathy (i.e. incarcerated psychopathic individuals) show neurological deficits (e.g. prefrontal structural deficits) associated with impulsivity and unregulated behavior (Yang, Raine, Lencz, Bihle, LaCasse & Colletti, 2005). Additionally, they also tend to score high in irresponsibility, impulsivity, and negligence (Mullins-Sweat, et al., 2010). Consistent with the literature, Blair, Mitchell, and Blair (2005) found that lifestyle-antisocial factor is correlated with 'hot-blooded' and reactive aggression, whereas interpersonal-affective factor appears to be negatively

correlated with impulsive or reactive aggression and positively correlated with proactive, 'cold-blooded' and controlled aggression. High levels of impulsivity seem to placing unsuccessful psychopaths more prone to legal arrest and conviction for crimes. If this is the case and to the degree that the CU+CP group resembles unsuccessful psychopaths regarding their contact with authorities and punishment (Study 1), it is expected that the CU+CP group will score higher on regulation dyscontrol measures than the CU-only group.

Indeed, the majority of studies examining the CU+CP youth and their development of severe antisocial and aggressive behaviour found that this group shows the greatest level of self-dysregulation, especially on measures of impulsivity-hyperactivity (e.g. Fanti, 2013). Frick and White (2008) explained that youth with CU+CP scores higher on impulsivity, due to their lack of inhibition and the preference for novel and dangerous activities. These behavioural impairments place them at risk for severe aggression and violence in adolescence (Frick et al., 2003a). Moreover, prior studies have examined both CU groups in the level of impulsivity and attention (construct of effortful control; Rothbart, Ellis, & Posner, 2004) to find differences between the CU-only and CU+CP groups (Fanti, 2013; Frick et al., 2003b; Frick et al., 2005). It was found that the CU+CP youth score higher on impulsivity but lower on attention than the CU-only group, whereas the CU-only group score similarly to the Control youth. To the degree that the CU-only group score low in impulsivity compared to CU+CP group, it is expected that the CU-only group will also score lower in regulatory dyscontrol measures than the CU+CP group.

### **Interpersonal Characteristics**

Narcissism and Machiavellianism are the most commonly used factors measuring interpersonal style. Narcissism refers to a pattern of grandiosity, dominance and superiority (Corry, Merritt, Mrug, & Pamp, 2008), which are the traits of Interpersonal domain of psychopathy (Hart, Cox, & Hare, 2005), and is an important predictor of CP (Barry, Guelker, & Wallace, 2011). Barry, Frick, and Killian (2003) found that narcissism was related to both CU traits and aggression, whereas Fanti (2013) found that CU-only group scored lower on narcissism compared to the CU+CP group, but similar to the Control group, proposing that narcissism tends to be associated with the combination of CU and CP. Based on these findings it is expected that youth with CU-only will score lower on narcissism compared to those with CU+CP, but similar to those in the control group.

Along with CU traits and narcissism, Machiavellianism is the third characteristic which is combined under a cluster of aversive traits referred to as the "dark triad" (Paulhus & Williams, 2002), due to their cold and manipulative behavioural way (Christie & Geis,

1970). Machiavellianism is a description of manipulation and instrumental use of others for one's own personal gain, which seems to be high on psychopaths, making them skilled social manipulators (Widom, 1977). Repacholi, Slaughter, Pritchard, and Gibbs (2003) suggested that Machiavellianism is associated with social skills and charm, characteristics commonly used to describe the successful and industrial psychopaths (e.g. Babiak & Hare, 2006). If this is the case, it could be suggested that Machiavellianism is distinguished from other forms of antisocial behaviour (Kerig & Stellwagen, 2010), that is not a sensitive index of criminal behaviour (e.g., Rosenblatt & Hannum, 1969), and skills involving social acuity, such as deception, manipulation, and impression management, may contribute to youth's ability to commit more subtle antisocial acts and to evade detection (Salekin, 2006). To the degree that the CU-only group resembles successful psychopaths (Study 1), it is expected that the CU-only youth will have this manipulative characteristics, scoring higher on Machiavellianism compared to youth with CU+CP.

### **Overview of Study 2**

Study 2 aimed to examine differences within three individuals domains: Temperamental characteristics (BIS/BAS, sensitivity to punishment and reward, negative affect through fear, shyness, surgency), regulation dyscontrol (impulsivity, effortful control through inhibitory control, attention, activation control) and interpersonal characteristics (narcissism, Machiavellianism) using self-report and parent-report questionnaires. Based on prior research, it was predicted that youth in the CU-only group will show lower fearless temperamental characteristics compared to the CU+CP group, but both groups will be differentiated from the control group. Moreover, it was hypothesized that youth in the CU groups will score lower on BIS, higher on BAS, lower on sensitivity to punishment, higher on sensitivity to reward, lower on positive affect/ surgency, fear and shyness compared to the Control group. Additionally, it was predicted that youth in the CU-only group will score lower on impulsivity and higher on effortful control (inhibitory control, attention, activation control) compared to youth in the CU+CP group but similar to those in the control group. Lastly, it was expected that youth in the CU-only group will score higher on Machiavellianism but lower on narcissism than those in the CU+CP group, whereas youth in the control group will score low on both Machiavellianism and narcissism.

### **Methods of Study 2**

#### **Participants**

For the Study 2, 54 youth (50% females;  $M_{age} = 15.59$ ) agreed to complete anonymously the online self-report questionnaire. There were 13 individuals (24.1%;

92.3% females;  $Mage = 15.92$ ) in the Control group, 22 individuals (40.7%; 36.4% females;  $Mage = 14.86$ ) in CU-only group, and 19 individuals (35.2%, 36.8%, females;  $Mage = 16.21$ ) were in the CU+CP group. More mothers corresponded compared to their children on completing the parent-questionnaire; in total 135 mothers (49.6% females;  $Mage = 12.67$ ) completed anonymously the questionnaire, 70 mothers of youth in the Control group (51.9%; 58.6% females;  $Mage = 12.07$ ), 28 mothers of youth in the CU-only group (20.7%; 35.7% females;  $Mage = 13.57$ ) and 37 mothers of youth in the CU+CP group (27.4%; 40.5% females;  $Mage = 13.08$ ). There were 2 missing demographic data.

## Measures

**Temperament** was measured with a variety of measures in order to capture different perspectives of it: the Behavior Inhibition System and Behavior Activation system Questionnaire (BIS-BASQ), the Sensitivity to Punishment and Sensitivity to Reward Questionnaire (SPSR-Q) and Surgency scales (positive affect/ surgency, fear, shyness) from Early Adolescent Temperament Questionnaire-Revised (EATQ-R).

**Behavioral inhibition and activation** was measured by BIS-BAS (Carver & White, 1994), a 20-item self-report scale, 4-point Likert scale, ranging from 1 (*not true at all*) to 4 (*very true*). BIS-BAS contains two scales Behaviour Inhibition System (BIS) and Behavior Activation System (BAS). The BIS scale assesses anxiety sensitivity to external events (e.g., “I feel worried when I think I have done poorly at something”;  $n=7$ ;  $\alpha=.73$ ). The BAS scale ( $n=13$ ,  $\alpha = .88$ ) is subdivided in Reward Responsiveness (e.g., “When I get something I want, I feel excited and energized”;  $n=5$ ), Drive (e.g. “I go out of my way to get things I want”;  $n=4$ ) and Fun Seeking (e.g. “I crave excitement and new sensations”;  $n=4$ ). The scales have been used in community adolescent samples and have been associated with personality traits, psychopathology symptoms and physiological measures (e.g., Kohls, Peltzer, Herpertz-Dahlmann, & Konrad, 2009; Muris, Meesters, de Kanter, & Timmerman, 2005). None of the factors were correlated with the average CP and CU traits of the sample.

**Sensitivity to punishment and reward** was measured by SPSRQ, which assesses two orthogonal behavioural systems, the BIS / aversive behavior and the BAS/ appetitive motivation (Gray, 1982). Adolescents and their mothers completed the SPSRQ, a self-report (SPSRQ-C) and a parent report (SPSRQ-P) questionnaire respectively. In the current study, the adult self-report SPSR-Q (Torrubia et al., 2001) was adopted and modified to be used for youth (i.e. SPSRQ-C). Item 33 “Would it be difficult for you to ask your boss for a raise (salary increase)?” was inappropriate for youth and was eliminated. The modified

SPSRQ-C has 47 items, in a binary format (1=*yes*, 0=*no*) and contains two subscales, Sensitivity to Punishment (SP;  $n=23$  items,  $\alpha=.71$ ) and Sensitivity to Reward (SR;  $n=24$  items,  $\alpha=.76$ ). Scores for each scale can be obtained by adding all the “yes” answers. Importantly, previous studies showed an association between high levels of SR and fast respond in reward cues, than those with low levels of SR, whereas participants who scored high levels of SP responded more slowly to punishment cues than did those who scored low levels of SP (Torrubia et al., 2001). Correlation analysis showed that as the level of CP increases, the Sensitivity to Reward is higher ( $r=.405$ ,  $p=.003$ ), proposing that CU+CP will have higher Sensitivity to Reward. There was no other correlation between average CP/ CU traits and the measuring outcomes.

The parent version of SPSRQ (SPSRQ-P; Colder & O’Connor, 2004) is a 34-item report with a 5-point Likert scale (1 = *strongly disagree*, 5 = *strongly agree*) and it was originally based on the adult version of SPSR-Q (Torrubia et al., 2001). This version contains four subscales: Sensitivity to Punishment (e.g., “Your child is often afraid of new or unexpected situations”;  $n=14$  items,  $\alpha=.87$ ) and Reward Responsivity (e.g., “Your child often does things to be praised”;  $n=7$  items,  $\alpha=.80$ ). In previous studies it has been showed that sensitivity to reward is associated with externalizing problems and sensitivity to punishment is associated with internalizing problems (Colder & O’ Connor, 2004). Correlation analyses showed that Sensitivity to Reward based on mothers’ report was positively correlated with the level of CP ( $r=.205$ ,  $p=.019$ ) and CU traits ( $r=.207$ ,  $p=.017$ ) of the sample, showing as the level of CP and CU traits increasing, the individual is more sensitive to Reward.

**Fear, shyness, and positive affect/ surgency** were measured by EATQ, a self and parent report questionnaire that assesses temperament in early adolescence. Adolescents completed the EATQ-Revised (EATQ-R-C; Capaldi & Rothbart, 1992), a 5-point Likert scale (1=*almost always untrue of you*, 5=*almost always true for you*). From the original questionnaire, two dimensions of the temperament were measured ( $n=13$  items): Fear (i.e. unpleasant affect related to anticipation of distress;  $n=6$ ;  $\alpha=.65$ ), and Shyness (i.e. behavioral inhibition to novelty and challenge, especially social;  $n=7$ ;  $\alpha=.75$ ). Mothers completed the EATQ-R parent report (EATQ-R-P; Ellis & Rothbart, 1999), a 5-point scale assessment (1=*almost always untrue of your child*, 5=*almost always true of your child*). For the current study, three dimensions of the temperament were measured ( $n=20$  items): Positive affect/Surgency (i.e. the pleasure derived from activities involving high intensity or novelty;  $n=9$ ;  $\alpha=.61$ ), Fear (i.e. unpleasant affect related to anticipation of distress;  $n=6$ ;  $\alpha=.48$ ), Shyness (i.e. behavioral inhibition to novelty and challenge, especially social;  $n=5$ ;

$\alpha=.77$ ). Muris and Meesters (2009) have examined the self-report version and parent-report version of EATQ-R in youth, and found that different aspects of EATQ-R are correlated with personality (BIS and BAS) and psychopathology (anxiety, depression, aggression, conduct, hyperactivity). None of the outcome measures based on mothers and adolescents' reports showed significant correlation with the levels of CP and CU traits of the sample.

**Regulation dyscontrol** was measured with a variety of measures in order to capture different perspectives of it. Impulsivity was measured via Antisocial Process Screening Device (APSD) and activation control, inhibitory control and attention were measured via Early Adolescent Temperament Questionnaire-Revised (EATQ-R).

**Impulsivity** was measured with the Antisocial Process Screening Device (APSD; Frick & Hare, 2001). The APSD is a self-report (APSD-C) and parent-report (APSD-P) rating scale designed to assess dimensions of psychopathy among youth. APSD-C and APSD-P items are rated on a three-point Likert scale ranging from 0 (*not at all true*) to 2 (*definitely true*). For the present study, 5 items corresponding to the Impulsivity (e.g., "I do/He does not plan ahead or leave things until the last moment";  $\alpha = .61$  for self-report and  $\alpha=.75$  for parent-report) scale was used in analyses. There is substantial support for the validity of the self-report version of the APSD and for its ability to designate a group of antisocial youth with deficits in emotional functioning (e.g., Kimonis, Frick, Fazekas, & Loney, 2006). Impulsivity was positive correlated with the average CP ( $r=.566, p=.000$ ) and CU traits ( $r=.482, p=.000$ ) of the sample, based on adolescents' reports but not based on mothers' reports.

**Activation control, inhibitory control and attention** were measured with EATQ-R-C (Capaldi & Rothbart, 1992) for youth and EATQ-P for mothers (Ellis & Rothbart, 1999; see details in previous section). Attention scale measures the capacity to focus attention as well as to shift attention when desired and consists with 7 items in EATQ-R-C ( $\alpha= .54$ ), while it consists with 6 items in EATQ-P ( $\alpha=.69$ ). Inhibitory Control scale measures the capacity to plan, and to suppress inappropriate responses, consists with 11 items and the cronbach's alpha was .64 for the youth report, while the mothers' report consists with 5 items and the cronbach's alpha was .49. In EATQ-R-C ( $n= 8$  items,  $\alpha= .34$ ) and EATQ-P ( $n=7$  items,  $\alpha=.67$ ), Activation Control measures the capacity to perform an action when there is a strong tendency to avoid it. Based on adolescents' reports, correlation analyses showed that as the level of CP and CU traits decreases the Activation control ( $r=-.439, p=.001$ ;  $r=-.537, p=.000$ ), attention ( $r=-.400, p=.003$ ;  $r=-.493, p=.000$ ) and Inhibitory control ( $r=-.541, p=.000$ ;  $r=-.534, p=.000$ ) increases, explaining negative correlations between these measures and individuals with CP and CU traits. Based on mothers' reports

none of these outcome measures were significant correlated with the level of CP and CU traits of the sample.

**Interpersonal characteristics** that were measured for the purposes of this study were narcissism and Machiavellianism. Narcissism was measured via APSD (Frick & Hare, 2001), whereas Machiavellianism was measured via Kiddie Mach (Nachamie, 1969).

*Narcissism* was measured via APSD-C within youth and APSD-P (Frick & Hare, 2001) within mothers. Items are rated on a three-point Likert scale ranging from 0 (*not at all true*) to 2 (*definitely true*). The scale of narcissism consists with 7 items (e.g., ‘‘I act/ He acts charming or nice to get things I want/he wants’’;  $\alpha = .67$  for self-report and  $\alpha = .80$  for parent report). Narcissism was positive correlated with the average CP ( $r=.539, p=.000$ ) and CU traits ( $r=.444, p=.001$ ) of the sample, based on adolescents’ reports, but not based on mothers’ reports.

*Machiavellianism* was measured with Kiddie Mach (Nachamie, 1969), a 20-item self-report. Kiddie Mach was used to assess children's attitudes towards human nature and trust in interpersonal relationships (Christie & Geis, 1970). Kiddie Mach is a 4-Likert scale (5 = *agree very much* to 1 = *disagree very much*). Non Machiavellian items (2, 4, 6, 9, 10, 11, 14, 16, 17 and 19) were reverse scored for consistency with the Machiavellianism construct, so that high scores on these items indicated disagreement and therefore Machiavellianism. The possible range of scores was 20-100; higher score suggest higher levels of Machiavellianism. Internal consistency was found to be satisfactory ( $\alpha=0.53$ ). From a previous factor analysis in Greek population (Andreou, 2004) Kiddie Mach was determined by four scales, Lack of faith ( $n=5, \alpha=.43$ ), Manipulation ( $n=5, \alpha=.50$ ), Dishonesty ( $n=5, \alpha=.29$ ), Distrust ( $n=3, \alpha=.37$ ). Items 1 and 19 were not loading over .40. Correlation analyses showed that Manipulation and Dishonesty were positively correlated with the level of CU traits ( $r=.286-.368, p=.036-.006$ ), showing possible association for those high on CU traits.

### **Plan of Analysis**

Separate Univariate Analyses of Variance (ANOVA) were conducted in IBM SPSS 20.0 to examine for main effects of the identified groups (control, CU-only, CU+CP) on the various dependent variables relating to temperamental characteristics (i.e. behaviour inhibition and activation, sensitivity to punishment and reward, activation control, positive affect/ surgency, fear and shyness), behavioural dyscontrol (i.e. impulsivity, inhibitory control, activation control and attention) and interpersonal characteristics (i.e. narcissism and Machiavellianism). Post-hoc Bonferroni tests were used in all analyses. Standardized

mean difference effect sizes (Cohen's  $d = .20$  small,  $d = .50$  medium,  $d = .80$  large; Cohen, 1992) are reported in text to explicate main effects.

## Results of Study 2

Table 6 shows findings from the Univariate ANOVA comparing the identified groups based on youth's reports, whereas Table 7 shows main effects based on mothers' reports.

### Temperamental Characteristics

**Behavior Inhibition/Activation.** The analysis indicated no significant main effect of groups on BIS,  $F(2, 50) = .829, p = .443, \eta^2 = .032$ , or on BAS,  $F(2, 51) = 2.730, p = .075, \eta^2 = .097$ . However, the control group seem to have a higher behavior inhibition compared to the CU-only group ( $d = .46, p = .626$ ), based on medium effect size. Additionally, large effect sizes indicated that the CU+CP group may be higher behavior activated than the CU-only group ( $d = .76, p = .070$ ).

**Sensitivity to Punishment and Reward.** A significant main effect of groups was found in relation to Sensitivity to Reward,  $F(2, 50) = 4.096, p \leq .05, \eta^2 = .141$ . Medium to large effect sizes showed that youth in the CU+CP group is more sensitive to reward than those in the Control group ( $d = 1.04; p = .023$ ) and the CU-only group ( $d = .61, p = .200$ ), whereas those in the CU-only group reported higher sensitivity to reward than the Control group ( $d = .42, p = .758$ ). No differences were found between groups on Sensitivity to Punishment,  $F(2, 50) = .246, p = .783, \eta^2 = .010$ , with youth across the three groups to have similar sensitivity to punishment. According to mothers' reports, comparing analyses indicated main effects of groups on both Sensitivity to Punishment,  $F(2, 140) = 3.871, p \leq .05, \eta^2 = .053$  and Sensitivity to Reward,  $F(2, 140) = 8.410, p \leq .01, \eta^2 = .109$ , indicating differences between groups. Moreover, findings revealed that youth in the CU+CP group tend to be more sensitive to punishment compared to youth in the Control group ( $d = .55, p = .024$ ), and more sensitive to reward compared to the Control group ( $d = .84, p = .000$ ) and the CU-only group ( $d = .66, p = .020$ ), indicated by medium effect sizes.

**Shyness.** The ANOVA comparing groups on Shyness revealed no significant main effect,  $F(2, 49) = 1.463, p = .241, \eta^2 = .056$ ; however it was found that youth in the Control group may be more shy than youth in the CU+CP ( $d = .58; p = .286$ ), indicated by medium effect size. On the other hand, mothers' reports revealed that groups differ on Shyness,  $F(2, 139) = 3.171, p \leq .05, \eta^2 = .045$ , indicating that youth in the CU-only group tend to be more shy compared to those in the Control group ( $d = 0.52, p = .050$ ).

**Fear.** As shown in Table 6 and 7, no significant main effect were found between groups on Fear, reported by youth,  $F(2, 49) = .683, p = .510, \eta^2 = .027$ , and by their

mothers,  $F(2, 134) = .632, p = .533, \eta^2 = .010$ . This indicates that groups despite their level of CP or CU are not differentiated on the emotion of fear.

**Positive affect/ Surgency.** Positive affect/ Surgency was analyzed only based on mothers' reports, whereas there was a significant main effect of groups on it,  $F(2,120) = 3.596, p \leq .05, \eta^2 = .058$ . Medium to huge effect sizes suggested that youth in the Control group may be more surgent, as positive affected, compared to youth in the CU-only group ( $d=1.07, p=.025$ ) and to youth in the CU+CP group ( $d=1.59, p=1$ ). Importantly, findings also suggested that youth in the CU+CP group may be more surgent than those in the CU-only group ( $d=.50, p=.282$ ), .

### **Regulation Control**

**Impulsivity.** The ANOVA analysis revealed main effect of groups on Impulsivity  $F(2, 51) = 17.867, p \leq .01, \eta^2 = .412$ , where youth in the CU+CP group seem to be more impulsive than youth in the Control ( $d=2.23, p=.000$ ) and CU-only group ( $d=1.33, p=.001$ ). Also, it was indicated by large effect size that youth in the CU-only group are more impulsive than youth in the Control group ( $d=.91, p=.052$ ). Comparing groups based on mothers' reports, showed significant main effect of groups was found on Impulsivity  $F(2, 107) = 37.965, p \leq .01, \eta^2 = .422$ , suggesting differences between groups. Large to huge effect sizes showed that youth in the CU+CP group have higher impulsivity levels than those in CU-only group ( $d=1.06, p=.002$ ) and those in the Control group ( $d=2.07, p=.000$ ). Also, youth in the CU-only group seem to be more impulsive than those in the Control group ( $d=1.04, p=.000$ ), indicated by large effect size.

**Activation Control.** Comparisons analyses showed main effects of groups on Activation Control,  $F(2, 49) = 17.753, p \leq .01, \eta^2 = .420$ , whereas youth in the Control group tend to have higher activation control than youth in the CU-only group ( $d=1.71, p=.000$ ) and youth in the CU+CP group ( $d=2.13, p=.000$ ). Differences between groups were suggested while comparing groups according to mothers' reports, on Activate Control,  $F(2, 139) = 27.680, p \leq .01, \eta^2 = .289$ . It was showed that youth in the Control group have more activated control compared to those in the CU-only group ( $d=.71, p=.003$ ), and those in the CU+CP group ( $d=1.53, p=.000$ ), while youth in the CU-only group seems to be more activate control compared to those in the CU+CP group ( $d=.81, p=.003$ ).

**Attention.** Significant main effects of groups were found on Attention,  $F(2, 49) = 9.526, p \leq .01, \eta^2 = .280$ , based on youth's reports. Youth in the Control group reported being more attentive than those in the CU-only group ( $d=.88, p=.054$ ) and the CU+CP group ( $d=1.62, p=.000$ ), and at the same time youth in the CU-only group seem to be more

attentive than those in the CU+CP group ( $d=.71, p=.103$ ). A main effect of groups was also identified on Attention, based on mothers' reports,  $F(2, 139) = 18.758, p \leq .01, \eta^2 = .216$ , suggesting that youth in the Control group are more attentive compared to those in the CU-only group ( $d=.74, p=.002$ ), and those in the CU+CP group ( $d=1.22, p=.000$ ). Also, findings suggested that youth in the CU-only group have higher attention levels than those in the CU+CP group ( $d=.48, p=.154$ ).

**Inhibitory Control.** Comparing groups based on youth's reports, significant main effects were found on Inhibitory Control,  $F(2, 49) = 13.628, p \leq .01, \eta^2 = .357$ . Findings indicated that youth in the Control group have higher inhibitory control levels compared to those in the CU-only group ( $d=1.27, p=.003$ ) and those in the CU+CP group ( $d=1.94, p=.000$ ). Importantly, findings indicated differences between CU groups, whereas CU-only group tend to have more inhibitory control than those in the CU+CP group ( $d=.63, p=.180$ ). Based on mothers' report, a significant main effect of groups was found on Inhibitory Control,  $F(2, 139) = 14.138, p \leq .01, \eta^2 = .172$ . Findings suggested that youth in the Control group have more inhibitory control compared to those in the CU-only group ( $d=.43, p=.131$ ) and those in the CU+CP group ( $d=.88, p=.000$ ). Importantly, findings also suggested that those in the CU-only group are more inhibited compared to those in the CU+CP group ( $d=.65, p=.022$ ).

### **Interpersonal Characteristics**

**Narcissism.** Significant main effect of groups was found on Narcissism  $F(2, 51) = 14.147, p \leq .01, \eta^2 = .141$ . Youth in the CU+CP group reported higher levels of narcissism compared to the Control group ( $d=1.84, p=.000$ ) and the CU-only group ( $d=1.17, p=.001$ ), whereas youth in the CU-only group seem to have more narcissistic characteristics than those in the Control group ( $d=.68, p=.187$ ). The ANOVA comparing groups according to mothers' reports revealed a significant main effect of groups on Narcissism,  $F(2, 106) = 32.554, p \leq .01, \eta^2 = .387$ , suggesting that youth in the CU+CP group are more narcissistic compared to those in the Control group ( $d=1.94, p=.000$ ), and to those in the CU-only group ( $d=.92, p=.006$ ). Additionally, youth in the CU-only group have higher narcissism than those in the Control group ( $d=1.02, p=.000$ ).

**Machiavellianism.** Analyses comparing groups showed that groups reported differences only on Dishonesty,  $F(2, 51) = 6.849, p \leq .01, \eta^2 = .212$ , revealing that youth in the Control group are less dishonest compared to those in the CU-only group ( $d=1.34, p=.002$ ) and those in the CU+CP group ( $d=.98, p=.033$ ), but no differences were found between CU groups. Additionally, there were no significant differences between groups on Manipulation,  $F(2, 51) = 1.707, p = .192, \eta^2 = .063$ , on Distrust  $F(2, 51) = .982, p = .382$ ,

$\eta^2 = .037$ , or Lack of Faith,  $F(2, 51) = .695$ ,  $p = .504$ ,  $\eta^2 = .027$ . However, extra indications showed that youth in the Control group are less manipulative than those in the CU-only group ( $d=.62$ ,  $p=.294$ ), and CU+CP youth ( $d=.61$ ,  $p=.328$ ), based on medium effect size. Moreover, it was suggested that youth in the Control group have less distrust compared to those in the CU-only group ( $d=.50$ ,  $p=.533$ ) and those in the CU+CP group ( $d=.40$ ,  $p=.855$ ).

## Discussion of Study 2

Study 2 aimed to determine how heterogeneous groups with high levels of CU traits differ in three groups of variables: temperamental characteristics (behavior inhibition and activation, sensitivity to punishment and reward, positive affect/ surgency, shyness and fear), regulatory dyscontrol (impulsivity, activate control, inhibitory control and attention) and interpersonal characteristics (narcissism and Machiavellianism). Results of the present study point to the importance of taking heterogeneity within CU traits, since youth with CU traits high on CP were differentiated from youth low on CP across the three aforementioned categories. Findings showed that youth with CU traits, regardless of their CP level, had characteristics of a less inhibited temperament, such as behavior inhibition, positive affect/ surgency and shyness, compared to youth in the control group. However, those with CU+CP differentiated by those with CU-only based on their higher sensitivity to reward and behavior activation. Moreover, they were also found to be more impulsive and less self-regulated regarding their attention, activation and inhibition control than those with CU-only. Lastly, youth with CU traits seems to be described with characteristics of Machiavellianism but especially those in the CU+CP group tend to be more narcissistic as well. This heterogeneity within CU traits add to the theoretical framework for conceptualizing and understanding CU traits without CP, contributing to understand and therefore prevent youth in the CU-only group from developing to successful psychopaths.

### Temperament

Current findings suggest a similar pathway on temperament leading to CU heterogeneity. Both CU groups did not report to avoid negative or threatening outcomes in the presence of aversive stimuli or punishment. Additionally, findings showed that they show similar behavior inhibition, sensitivity to punishment and have similarly levels of fear and shyness, which is related with prior work (Frick et al., 2003b), providing a more complete picture of fearless temperament. Firstly, these findings support the inter-relation between behavior inhibition and punishment (Fanti et al., 2015; Fowless, 1980, 2006) and that sensitivity to punishment might reflect to behavioral inhibition (Torrubia et al., 2001), since CU groups seem to score similarly to both these related fearless characteristics. The

temperamental fearlessness and punishment insensitivity that has been proposed (Dadds & Salmon, 2011; Frick & Morris, 2004) can lead to the development of deficits in guilt and conscience, which are hypothesized to lead to CU traits and psychopathy (Kochanska, 1993, 1995). In the contrary, CU groups are distinguished regarding their behavior activation, sensitivity to reward and positive affect/ surgency. These findings add to prior work, by suggesting that youth in the CU+CP group have high levels of BAS and sensitivity to reward (e.g. Barker et al., 2011; Fanti et al., 2015; Frick et al., 2003b). Moreover, the present study is the first to show that youth in the CU-only group has weaker BAS activity than those in the CU+CP group. This novel finding also provides information on what influence youth CU-only to evade antisocial behavior and CP. It is possible that the normal levels of reward-oriented temperament combined with high insensitivity to punishment might react as a protective factor for CU-only group. A possible explanation is that the CU-only group is less sensitive about the reward or reinforcement an antisocial behavior might give (Dadds & Salmon, 2003), leading them to not move toward in goal-directed efforts as antisocial behavior.

### **Regulation Control**

Secondly, the study's findings replicate prior work showing that youth in the CU+CP group are more impulsive, and less self-regulated (inhibitory control, attention, activation control) compared to youth in the CU-only group, providing additional evidence for heterogeneity within CU traits (e.g. Fanti, 2013; Frick et al., 2003b). A majority of studies have shown that individuals with deficits in impulsivity, self-control and attention are more likely to develop antisocial behavior, due to their difficulties regulating their behavior (e.g. Pardini, Lochman, & Frick, 2003). Therefore, these findings come to verify the hypothesis of this study; that different risk factors might be responsible for the heterogeneity within CU traits. Two different pathways are being considered regarding CU traits, CU youth with impulsive, dysregulated and inattentive behavior develop antisocial behavior and CP, whereas CU youth who are more self-regulated abstain from developing antisocial behavior and CP. This suggests that self-regulation can be considered as a protective factor refraining youth from antisocial behavior and criminality, even for those with high CU traits. Gardner, Dishion, and Connell (2008) suggested that self-regulation serves as a resiliency factor in buffering youth from negative influences of peer deviance, using self-regulation as a moderator between peer deviance and antisocial behavior. Moreover, Quinn and Fromme (2010) found that high self-regulation inversely predicted heavy drinking, alcohol related problems and unprotected sex. The protective effects of

self-regulation over delinquency, CP and antisocial behavior make it a promising target for early prevention and intervention among youth in the CU+CP group.

### **Interpersonal Characteristics**

As was expected, CU groups were differentiated across measures of narcissism and Machiavellianism. Youth in the CU+CP group were more likely to present higher narcissistic characteristics compared to the CU-only group, but at the same time youth in the CU+CP group had similar Machiavellianism characteristics (i.e. lack of faith, manipulation, dishonesty and distrust) as those in the CU-only group. Once again, the differentiation between the CU groups provides additional evidence for heterogeneity within CU traits. The higher scores on narcissism reported by youth in the CU+CP group are consistent with previous studies (e.g. Fanti, 2013). This could suggest that narcissistic interpersonal style, grandiosity and egocentricity, is more likely to appear with co-occurring CP and CU traits. Moreover, Barry et al (2003) found that high narcissism is a risk factor for antisocial behavior, leading to the suggestion that lower narcissism could be held as a protective factor allowing youth to refrain from antisocial behavior. For example, it is possible that lower levels of narcissism can lead CU youth to approach the possibility of being punished with a less arrogant way, acting more cautiously.

On the other hand, Machiavellianism seems to appear within both CU groups, proposing that Machiavellianism links to CU traits per se, regardless the level of CP. The similar characteristics regarding lack of faith, manipulation, dishonesty and distrust might contribute as risk factors to CU traits. Arefi (2013) proposed that youth's beliefs, such as Machiavellianism, can be predicted by the powerful variable of empathy, whereas Repacholi et al. (2003) found that teacher reports of Machiavellianism are related to low levels of prosocial behavior. Moreover, Lau (2010) found that there was no association between Machiavellianism and externalizing problems. If this is the case, CU youth's high reports on Machiavellianism could be explained by CU youth's failure on empathy and prosocial behavior (Blair, 2006; Fowles & Kochanska, 2000); characteristics commonly appear in youth with CU traits and commonly associated with the core affective domain of psychopathy.

### **Conclusions of Study 2**

Current findings point to the importance of taking heterogeneity into account concerning the temperamental, self-regulation and interpersonal differences between the CU groups. The findings of the present study suggest that self-dysregulation (i.e. impulsivity, inhibitory dyscontrol, inattention) in combination with higher sensitivity to reward might be risk factors for combined CP and CU traits. On the other hand, lower

sensitivity to reward combined with self-regulation (i.e. low impulsivity, inhibitory control, and attention) are risk factors for CU traits without CP. It seems that youth who are self-regulated and less sensitive to reward (control and CU-only) are less likely to develop CP, proving the importance of these factors in the development of CP and other psychopathologies (Moeller et al., 2001). Additionally, impulsivity and self-dysregulation have been associated with deficits in executive function (Bari & Robbins, 2013), explaining unsuccessful and successful psychopaths' differences in impulsivity. If this is the case, future studies may explain the differences in executive function. Similarly, Gao and Raine (2010) suggested that different levels on impulsivity between psychopathy may explain the different behavior outcome, incarceration or evading incarceration: Due to their lack of impulsivity, individuals with successful psychopathy are able to avoid criminal behavior and getting caught, whereas individuals with unsuccessful psychopathy, due to their impulsivity seem to be more reckless and erratic, displaying reasons of them to get caught (Hare, 1991).

Additionally, in "Snakes in suits" (Babiak & Hare, 2006) and "the Mask of Sanity" (Cleckley, 1988) individuals with successful psychopathy were described as being deceitful, conning, manipulative and using methodic ways to get what they want, instead of behaviors that could get them incarcerated or hospitalized. The fact that youth with CU-only present characteristics of Machiavellianism puts them in risk for using deceitful, conning and manipulative methods against other people, which shows the resemblance to individuals with successful psychopathy. At the same time the fact that they do not score so high in narcissism as those with CU+CP might helps them to not engage in CP. Although the behaviours that youth with CU-only engage are covert, they cost an amount of money to the community (Babiak & Hare, 2006; Hare, 2001) and of course behaviors like those analyzed in Study 1 (e.g. vandalism) might have cost to the schools and society as well.

Findings of the present study, not only conceptualize the heterogeneity within CU traits, but also align with adult literature on characteristics of psychopathy, suggesting that both CU groups might have resembling characteristics to individuals with unsuccessful and successful psychopathy. Furthermore, it has been proposed before, that CU traits are a precursor of psychopathy and the present findings add to this theory, by suggesting that both CU groups are at risk for developing characteristics similar those with unsuccessful and successful psychopathy. Additionally, these findings provide evidence on extending the construct of psychopathy to youth in order to identify youth at risk for developing psychopathic characteristics. Consequently, understanding the etiology and the

development of psychopathy will point out characteristics or areas to be targeted in developed education, prevention or therapeutic programs, such as self-regulation.

### **Study 3: Conceptualizing the CU-only group based on Executive and Intellectual Functioning**

Two sorts of neuropsychological deficits that usually appear with persistent antisocial is verbal and executive functions (Moffitt, 1993). Executive Function (EF) represents higher-order abilities involved in goal-directed behaviours, for example, ability for planning, decision-making, organization, and problem-solving (Luria, 1980), whereas Intellectual Function (IF) refers to verbal and non-verbal abilities, for example, listening, reading and speech (Moffitt, 1993). The CU+CP group appears to be a subgroup of those with persistent antisocial behaviour (Moffitt et al., 2008). Typical characteristics of those with CU+CP, impulsivity and self-dysregulation (Study 2; Fanti, 2013), seem to be associated with deficits in EF abilities (Garner, 2009), which may underlie youth participating in antisocial acts. On the other hand, youth in the CU-only group score low on impulsivity and self-dysregulation (Study 2; Fanti, 2013), which might suggest that they have better EF abilities than youth with CU+CP. Furthermore, it has been proposed that verbal abilities can act as a protective factor to reduce the likelihood of delinquency, especially in those with life-persistent antisocial behaviour (Moffitt, 1993). Additionally, it was suggested that youth with CU+CP may differentiate across verbal and nonverbal abilities (Loney, Frick, Ellis, & McCoy, 1998). Furthermore, it seems that IF may have a different effect among children with CU traits, regarding that youth with CU traits and high IF have more severe delinquency (Munoz et al., 2008). The association between CU traits and IF is still unclear, which could be due to the heterogeneity of the sample. Therefore, the aim of the present study is to examine EF and IF abilities via neuropsychological measures in order to understand the development and conceptualization of heterogeneity within CU traits.

#### **Executive Functioning**

Gao and Raine (2010) proposed a theoretical model on heterogeneity within psychopathy, suggesting that differences on the level of self-regulation and self-control within psychopathy, may reflect differences in EF and consequently their tendency for developing successful or unsuccessful outcomes (i.e. avoidance of conviction, use of covert and non-violent behaviours). A variety of theoretical contexts on monitoring and adjusting one's behavior within EF skills links the ability to successful psychopaths to evade capture by law enforcement (Sifferd & Hirstein, 2013) or be a successful leader in industry (Babiak, 1995). This proposes that enhanced or normal EF may protect

individuals with psychopathy from being detected and arrested, allowing them to perpetrate significant harm to others in the community (Gao & Raine, 2010). The CU groups behave similarly to psychopathy groups (Study 1, Study 2), whereas youth with CU-only avoided detection and punishment and scored low on impulsivity/ self-dysregulation, and youth with CU+CP failed to avoid detection or punishment and scored high on impulsivity/ self-regulation. Based on Gao and Raine's theoretical concept, EF abilities may underlie this heterogeneity within CU traits. Extending the adult psychopathy literature to adolescence, specific EF skills will be examined within CU groups: Selective attention, strategic planning and decision making.

**Decision making.** Decision-making is a process resulting in the selection between situations and is negatively associated with impulsivity. It was suggested that poor decision-making among those with CU traits is due to their impairments in fear conditioning (Lykken, 1957), startle reflex priming (Levenston, Patrick, Bradley, & Lang, 2000) and autonomic responding to distress cues (Blair, Jones, Clark, & Smith, 1997). This seems to result in a reward-dominant style and lack of fear on punishments, which makes the individuals to fail on anticipating a negative outcome when choosing between whether or not to engage in the same antisocial action (Fanti et al., under review). Deficits in decision making were observed among criminal psychopathic individuals compared to criminal non psychopathic individuals in the Iowa Gambling Task (IGT; Bechara, Damasio, Damasio, & Anderson, 1994), as indicated by the tendency to select from the disadvantageous decks and the likeliness of making risky selections across the blocks (Mitchell, Colledge, Leonard, and Blair, 2002). In addition to criminal psychopaths, non-criminal psychopaths also made more risky decision and won less money in IGT compared to community non psychopaths, suggesting an impaired ability to show learning over the task (Mahmut, Homewood, & Stevenson, 2008). Moreover, Blair, Colledge, and Mitchell (2001) found that referred children with psychopathic tendencies compared to control children were more likely to make the risk decisions, by playing more from the disadvantageous decks and failing to learn to avoid those cards. Although literature with psychopathic traits provides evidence on similar decision making between non-criminal and criminal psychopathy, it is important to keep in mind that IGT scoring is influenced by reward and punishment (Bechara et al, 1994). This proposes that differences in sensitivity to punishment/reward between groups (Study 2) may differentiate the decision making between CU groups. Additionally, prior laboratory examinations on risk taking and future orientation between CU groups found that the CU-only group took less risks than the

CU+CP group (Fanti et al., under review), suggesting differences between CU groups in risky decision-making.

**Selective attention.** Selective attention is a process that keeps individual's focus on goals and helps with decision between potential actions (Roelofs, 2003). In the Stroop test (see MacLeod, 1991 for a review) attentional dysfunction is indicated by high interference scores (i.e., difficulty inhibiting the pre-potent response of reading the color word when the task goal is to name the conflicting color of the ink in which it is written). Literature in psychopathy presents contradicting ideas regarding attention, whether individuals with psychopathy tend to have some form of attentional dysfunction (Cauffman, Kimonis, Dmitrieva, & Monahan, 2009) or over-focused attention (Hiatt, Schmitt, & Newman, 2004; Newman, Schmidt and Voss, 1997; Pham, Vanderstukken, Philippot, & Vanderlindern, 2003; Smith, Arnett, & Newman, 1992), when compared to non-psychopathic criminals. When CU groups were compared in selective attention with Stroop task, Fanti et al. (under review) found that they have similar reaction time and accuracy, but there were no data on interference score. Moreover, it was found that CU-only group indeed are related to inattention; however their inattention levels were not as high as those with CU+CP (Fanti, 2013), suggesting differences between CU groups.

**Strategic planning.** Strategic planning is an organizing process of defining individual's strategy, involves setting goals, determining actions to achieve the goals, and mobilizing resources to execute the actions. The Tower of London Test (TOL; Shallice, 1982) is an instrument designed to assess executive planning abilities, in which participants need to replicate a model that is presented to them as fast as possible. Impulsive responses are more likely to increase the number of moves for solving the model (Albert & Steinberg, 2008). Deficits in considering the consequences of a problem and acting impulsively are characteristics of those with psychopathy (Hare, 2003), especially unsuccessful ones (Gao & Raine, 2010). For example, Pham et al. (2003) found that incarcerated psychopathic compared to non-psychopathic individuals tend to use more movements in misleading models and took them longer to complete the tasks. Additionally, Bagshaw, Gray, and Snowden (2014) found that both factors of psychopathy were associated negatively to planning time, with F1 showing a stronger association. It is possible that due to their impulsivity, individuals with psychopathy start to solve the problem without planning of how to solve the task. On the other hand, not all psychopaths are impulsive (Snowden & Gray, 2011), like successful ones (Gao & Raine, 2010). Individuals with successful psychopathy also appear to be methodical, planned on their white-collar and less impulsive crimes based on qualitative data (e.g. Babiak & Hare,

2006; Woodworth & Porter, 2002), suggesting different planning strategies from those with unsuccessful psychopathy. Additionally, it was found that individuals with corporate psychopathy (i.e. individuals with psychopathy in companies) scored high on strategic thinking (Babiak, Neumann & Hare, 2010). It is established that CU groups differentiate in impulsivity (e.g. Study 2; Fanti, 2013), proposing differentiation in their planning as well.

### **Intellectual Functioning**

IF is a construct combining verbal and nonverbal abilities. Verbal ability refers to the cognitive ability to use and understand language (e.g. language proficiency, verbal communication, verbal reasoning, oral language) and Vocabulary (i.e. expressive vocabulary and definitions) is one of the most used tasks for measuring it. Non verbal ability refers to cognitive ability displayed in non verbal areas for example mathematical, mechanical, spatial abilities and Matrix Reasoning (i.e. incomplete matrix or series and selects the response option that completes the matrix or series) is one of the most used tasks for measuring it. Cleckley (1988) believed that “good intelligence” (p. 208) is a hallmark of psychopathy, described individuals with psychopathy having a superior intelligent and being verbally facile. He also suggested that these characteristics may help them capture the attention of others, charm, manipulate, deceive and con others. However, the majority of studies, using a total score of IF, found mixed associations between psychopathy and IF, contradicting Cleckley’s assumptions on superior intelligence. Therefore, the main focus of the present study is to differentiate CU groups by examining separately IF skills: verbal and non-verbal intellectual abilities.

Empirical research showed that the different facets of psychopathy (e.g. interpersonal, affective, behavioral and lifestyle) may correlated with IF, producing conflicting in the literature. For example, when measured psychopathy as a total score there was no relation between verbal or nonverbal abilities (Bauer, Whitman, & Kosson, 2011). When two factors of psychopathy (F1 and F2; Psychopathy Checklist-Revised; PCL-R; Hare, 2003) were correlated with IQ total score, F2 (antisocial and lifestyle facet) was negatively associated with IQ and F1 (affective and interpersonal facet) was positively associated with IQ (Harpur, Hare, & Hakstian, 1989; Heinzen, Köhler, Godt, Geiger, & Huchzermeier, 2011). However, when four factors of psychopathy (Cook & Michie, 2004) were correlated with total IQ score or verbal abilities, then there was a positive correlation with antisocial and interpersonal factors and a negative correlation with affective and interpersonal factors (De Lisi, Vaughn, Beaver, & Wrigth, 2010; Salekin, Neumann, Leistico, & Zalot, 2004; Vitacco, Neumann, & Jackson, 2005; Vitacco, Neumann, & Wodushek, 2008). Comparing groups of individuals with psychopathy, Johansson and Kerr

(2005) and later Ermer and Kiehl (2010) found that there were no differences between incarcerated psychopathic and non-psychopathic individuals in verbal and nonverbal abilities, or IF in total. Although each psychopathy factor seems to be correlated differently with intellectual abilities, it seems that when compared in antisocial population these differences no longer appear.

Of course, if indeed interpersonal and antisocial characteristics are more associated with IQ within psychopathy, this could suggest that CU youth high on interpersonal characteristics and/or antisocial behavior may have better verbal abilities compared to those who have low on interpersonal and/or antisocial characteristics. De Brito et al. (2009) compared community youth with CU+CP and youth with typical development (*Mage* = 11.7 years old) on total IQ (Vocabulary and Matrix Reasoning). What they found was that control group had a higher score than youth with CU+CP, showing that the combination of CU and CP have a negative association with the total IQ. When verbal and nonverbal abilities are measured separately, youth with CU+CP compared to antisocial youth without CU traits, seem to have better verbal abilities and weaker nonverbal abilities: Loney et al. (1998) examined clinic-referred children between the ages of 6 and 13 and found that children with CU+CP did not show verbal deficits, but deficits in nonverbal abilities, compared to those without CU traits. Additionally, Munoz et al. (2008) examined detained adolescents (*Mage*=15.53) and found that low nonverbal abilities underlie antisocial behavior in those with CU traits and not low verbal abilities, suggesting that those with low antisocial behavior may have better nonverbal abilities.

### **Overview of Study 3**

Limited studies have examined CU groups in different neuropsychological factors that may underlie the heterogeneity within CU traits. Study 3 aimed to advance knowledge about the extent to which deficits in EF (selective attention, decision-making, and strategic planning) and IF (verbal and non verbal abilities) might underlie subtypes of CU traits differentiated on the basis of CP, using computerized tasks. Expanding on prior research it was predicted that youth with CU-only will show better performance in selective attention, decision making and strategic planning in contrast to CU+CP group, while youth in the control group will have a better performance in all tasks of EF compared to both CU groups. Moreover, it was predicted that CU-only youth will have a better performance in nonverbal abilities than CU+CP group, but similar performance in verbal abilities. Also, it was expected that control group will have a similar performance in all IF tasks with youth with CU-only.

## Methods of Study 3

### Participants

In Study 3, 84 adolescents (40.6% females;  $M_{age} = 13.82$ ) completed the computerized tasks: Control group was consisted with 40 adolescents (47.6%; 52.5% females;  $M_{age} = 12.35$ ), 19 adolescents (22.6%; 31.6% females;  $M_{age} = 14.74$ ) were in CU-only group, and 25 adolescents (29.8%, 28%, females;  $M_{age} = 15.48$ ) were assigned in the CU+CP group. Important to note that 19 participants did not complete their age and out of those, 7 did not complete their gender.

### Measures

**Executive function** was measured via various computerized tasks: the Stroop task (Banich, Crowley, Thompson, Jacobson, Liu, Raymond, & Claus, 2007; Stroop, 1935), the modified Iowa Gambling task (Bechara et al., 1994), Tower of London (Shallice, 1982), assessing selective attention, decision-making, and strategic planning.

**The Stroop task** (Banich et al., 2007; Stroop, 1935). The Stroop task measures executive functioning dimensions of selective attention and response inhibition. On each trial, the participant was presented either a color-word (e.g. "blue", "yellow") or a neutral (i.e. non-color) word (e.g. "Math", "Add") and instructed to identify the color in which the word was printed (while ignoring the semantic meaning of the word) by pressing a corresponding key as quickly as possible. All color-word trials are incongruent such that the color of the ink in which the word was printed does not match the semantic meaning of the word (e.g., the word "blue" printed in yellow). In this version of the task, there are no color-word congruent trials in which the color-word matched the color of the ink in which it is printed. Participants completed two 48-trial experimental blocks. The first block included an equal mix of neutral and incongruent trials (easy block), and the second block included a greater number of neutral than incongruent trials (difficult block). Utilizing all trials, interference effects were calculated for response time (RT) and accuracy as the difference in average response time and ratio of accurate responses, respectively, on incongruent versus neutral trials. In order to allow interpretation of Stroop results as a capacity, the interference effects were reversed-scored for RT and accuracy, such that higher scores represent stronger inhibition of attention to distracting stimuli, and fewer inaccurate responses. The outcome variables are the participants' resistance to distracting stimuli based on the raw difference in RT for unequal (difficult block) and equal (easy block) incongruent and neutral trials. The delay in color naming (delay in RT) indicates Stroop interference, which reflects poor selective attention. None of the outcome measures

was significantly correlated with the level of CP and CU traits of the sample.

**Modified Iowa Gambling task** (IGT; Bechara et al., 1994; Cauffman, Shulman, Steinberg, Claus, Banich, Grahams, & Woolard, 2010). Modified IGT measures implicit decision-making under conditions of uncertainty, risk perception and risk preference. In this modified task, individuals attempt to earn points by playing or passing cards from four different decks, making it more sensitive to individual differences in performance because of the ability to determine the independent effects of gains and losses on subsequent card selection (Peters & Slovic, 2000). Another modification is that participants received information on the net gain or loss associated with a card, rather than information on both a gain and the loss separately. Two of the decks are associated with relatively small gains, but the small gains exceed losses over the course of the task, resulting in a net gain. The other two decks produce larger gains than the first two decks, but in the long run, these decks produce a net loss due to larger losses. In addition, within each type of deck (net gain vs. net loss), there is one deck in which the loss is infrequent but large, and the other deck produces losses that are consistent and small. The ability of choosing to pass on bad decks and play on good decks is a measure of decision-making under conditions of uncertainty and risk evaluation. The design of the task, with the play/pass option, permits independent measures of selecting advantageous decks versus avoiding disadvantageous ones. The preference to play the decks with more variance in the outcome is taken as a measure of reward sensitivity, whereas the preference to play the decks with less variance in the outcome is taken as a measure of punishment sensitivity. The task was administered in six blocks of 20 trials each. Selected outcome variables are the percentage of good plays out of valid good trials for the last (sixth) block and the percentage of bad plays out of valid bad trials for the last (sixth) block. Neither good nor bad plays correlated significantly with the level of CP and CU traits of the sample.

**Tower of London** (TOL; Shallice, 1982). A computerized version of the Tower of London task was used to generate behavioral indices of impulsivity and strategic planning. The task measures not only how well an individual can organize sequential behavior to reach a goal (strategic planning) but also whether one can inhibit acting before a plan is fully formed. The participants are presented with pictures of two sets of three colored balls distributed across three rods, one of which can hold three balls, one two balls, and the last, only one ball. The first picture shows the starting positioning of the three balls and the second depicts the goal position. The participants are asked to move the balls in the starting arrangement to match the goal arrangement in as few moves as necessary, using the computer cursor to “drag” and “drop” each ball. Five sets of four problems are presented,

beginning with four that can be solved in a minimum of 3 moves, and progressing to trials that can be solved in a minimum of 4, 5, 6, and 7 moves. Problems with 3- and 4-moves are the easy problems, while 6- and 7-move problems are the difficult problems. In the administration of the task, the starting and goal positions are displayed, and the participants take as much (or as little) time as necessary before making each move. The task is scored with regard to the proportion of problems correctly solved at each level of difficulty, the proportion correctly solved with the minimum number of moves, and the amount of time that elapses (in milliseconds) between the presentation of each problem and the participants' first move, with shorter latencies to first move indicating greater impulsivity. Selected outcome variables are the average time taken to make the first move for problems requiring at least 3-7 moves to complete and the average time taken to make the first move for easy and difficult problems. Correlation analyses between outcome measures and the level of CP/ CU traits of the sample showed positive association between the average time for 3-moves ( $r=.380-.381, p=.001$ ), 5-moves ( $r=.298-.300, p=.005$ ) and easy problems ( $r=.230, p=.032$ ).

**Intellectual function** was measured with a variety of computerized tasks: Matrix Reasoning subscales (Wechsler, 1999) and the Word Game (Temple University, 2011), assessing nonverbal and verbal abilities.

**Matrix Reasoning subscale** of the Wechsler Abbreviated Scale of Intelligence (WASI; Wechsler, 1999). The WASI is a brief scale of intelligence that estimates full scale intelligence using two or four subtests and has been normed for ages 6 through 89. The Matrix Reasoning subscale is administered for measuring the nonverbal intellectual ability. A total score is computed for each participant, based on the norms computed from age and score on the task. The total score was not significantly correlated to the level of CP or CU traits of the sample.

**Word game** (Temple University, 2011) examined the participants' verbal fluency, meaning their ability to list items that begin with a letter of the alphabet or are part of a category. Subjects have one minute to generate and verbally communicate words that are relevant to the category. For example, the experimenter would say "The first letter is 'F.' Go!" and for the next minute, the subject would recite as many words they could think of that begin with the letter, 'F'. In a "category" problem, subject is asked to generate a list of fruits, animals and vegetables. For each participant there is a total verbal fluency score, indicating score for verbal intelligence. Verbal fluency score was not significantly correlated to the level of CP or CU traits of the sample.

### **Plan of Analysis**

Separate Univariate Analyses of Variance (ANOVAs) were conducted in IBM SPSS 20.0 to examine for main effects of identified groups (control, CU-only, CU+CP) on the various dependent variables relating to EF and IF: a) selective attention, b) strategic planning, c) decision making, d) verbal intelligence, and e) nonverbal intelligence. Post-hoc Bonferroni tests were used in all analyses. Standardized mean difference effect sizes (Cohen's  $d = .20$  small,  $d = .50$  medium,  $d = .80$  large; Cohen, 1992) are reported in text to explicate interaction effects.

### Results of Study 3

Table 8 shows findings from ANOVA comparing the identified groups in EF and Table 9 shows main effects in IF, based on youth's computerized task scores.

#### Executive Function

**Selective attention (Stroop task).** Main analysis revealed that there was no significant main effect of groups on response time (RT) for incongruent trials within the difficult block (i.e. unequal incongruent and neutral trials),  $F(2, 70) = 1.898, p = .158, \eta^2 = .054$ . Medium effect sizes showed that youth in the CU+CP group have longer RT compared to youth in the Control group ( $d = .58, p = .171$ ) and CU-only group ( $d = .47, p = .612$ ), suggesting that when incongruent words are rare, youth in the CU+CP group tends to have more interference than youth in the other groups. There was no significant main effect of groups on RT for incongruent trials within easy block (i.e. equal incongruent and neutral trials),  $F(2, 71) = .041, p = .960, \eta^2 = .001$ , showing that there are no RT differences between youth in the groups when incongruent trials appear equally with neutral trials.

**Strategic planning (TOL).** Comparisons analysis revealed a main effect of groups on average time (AT) taken to make the first move for at least three moves' problems,  $F(2, 68) = 4.123, p \leq .05, \eta^2 = .113$ , indicating that youth in the Control group took more time to make their first move compared to youth in the CU-only group ( $d = .72, p = .064$ ), and youth in the CU+CP group ( $d = .71, p = .055$ ). Additionally, analysis also showed main effect on groups for easy problems (three to four moves),  $F(2, 68) = 3.046, p \leq .05, \eta^2 = .086$ , revealing that youth in the Control group tended to take more time to make their first move compared to youth in the CU-only group ( $d = .47, p = .381$ ) and youth in the CU+CP group ( $d = .70, p = .062$ ).

No significant main effect of groups was found on AT of first move for at least four moves' problems,  $F(2, 69) = 1.960, p = .149, \eta^2 = .056$ , suggesting that youth in the CU+CP group took less time to make their move for problems with at least four moves compared to youth in the Control group ( $d = .45, p = .403$ ) and youth in the CU-only group

( $d=.62, p=.189$ ). Analysis also showed no significant main effect of groups on AT of first move for at least five moves' problems,  $F(2, 69) = 1.335, p = .270, \eta^2 = .039$ , which indicated that youth in the Control group took more time to make their first move in problems with at least five moves compared to those in the CU+CP group ( $d=.45, p=.395$ ). Moreover, no significant main effect of groups was found on AT of first move for at least six moves' problems,  $F(2, 67) = .720, p = .491, \eta^2 = .022$ , and AT of first move for at least seven moves' problems,  $F(2, 68) = .046, p = .955, \eta^2 = .001$ . Last, analysis revealed no significant main effect on AT of first move for hard problems (six to seven moves),  $F(2, 69) = .222, p = .802, \eta^2 = .007$ , suggesting that in hard tasks they could all plan similarly.

**Decision making (IGT).** There was no significant main effect of groups on the percentage of bad plays out of valid bad trials for the last block,  $F(2, 76) = .291, p = .749, \eta^2 = .008$ , and on the percentage of good plays out of valid good trials for the last block,  $F(2, 76) = 1.058, p = .352, \eta^2 = .028$ . Medium effect size revealed that youth in the CU+CP had a bigger percentage of playing good cards compared to those in the CU-only group ( $d=.43, p=.628$ ).

### **Intellectual Function**

**Nonverbal abilities (Matrix Reasoning).** Analysis on comparisons groups revealed no differences between groups on nonverbal intellectual ability (based on norms),  $F(2, 78) = 2.268, p = .111, \eta^2 = .008$ . However, extra comparisons indicated that youth in the CU+CP group have less nonverbal intellectual abilities compared to youth in the Control group ( $d=.57, p=.121$ ) and those in the CU-only group ( $d=.50, p=.412$ ).

**Verbal abilities (Word Game).** No significant main effect of groups was found on Verbal fluency,  $F(2,74) = .221, p = .794, \eta^2 = .006$ , suggesting that there are no differences between groups on verbal intelligence.

### **Discussion of Study 3**

Study 3 aimed to determine how groups with high levels of CU traits differ in neuropsychological abilities, shedding light on the literature of youth with CU traits but low CP. It was examined whether CU youth with low or high CP could be differentiated in the basis of various assessment of executive and intellectual functioning. Findings show that CU groups share similar and different EF and IF abilities, contributing novel findings to the literature: Youth in the CU-only group have better selective attention and non-verbal abilities compared to those in the CU+CP group. Additionally, youth in the CU+CP group tend to make more decisions based on reward compared to those in the CU-only and control group. Youth in the Control group have better strategic planning but tend to make decisions based on punishment and verbal abilities similarly to youth with CU traits. While

these findings add to the theoretical framework for conceptualizing and understanding CU traits without CP, they also point to the importance of taking into account the heterogeneity within CU groups.

### **Executive Functioning**

**Selective attention.** As was predicted, youth in the CU-only group have a normal selective attention, while youth in the CU+CP group have a weaker selective attention in behavioral task, which are consistent with previous findings using self-report measurements (e.g. Study 2; Fanti, 2013; Rowe et al., 2010), providing a holistic validation to the theory of attention. Findings may also explain prior contradicting findings on attention within individuals with psychopathy or CU traits, whether they have normal/over-focus attention (e.g. Hiatt et al., 2004; Pham et al., 2003; Vitale, Newman, Bates, Goodnight, Dodge, & Pettitt, 2005), or posit a weak attention (Cauffman et al., 2009), providing evidence for differentiation within CU traits. Although prior studies suggested that attention deficits may reflect fear/ emotion deficits (Blair et al., 2001; Dadds et al., 2008; Dadds et al., 2006; Deeley et al., 2006; Leist & Dadds, 2009; Marsh & Blair, 2008; Raine, 2002; Adolphs, Gosselin, Buchanan, Tranel, Schyns, & Damasio 2005), the present study shows differently. No emotional stimuli was used in the current Stroop task, therefore it is proposed there is more than fearlessness and under-reactivity of CU traits that explains the impaired attention, but also more base EF abilities.

**Strategic planning.** While in easy problems the differences between groups were clearer, in the difficult problems groups were performing similarly, proposing differences in their planning across the difficultness of a problem. Regarding the planning abilities of youth with CU-only, findings on TOL were contradicting, given that in some easy problems they had similar rapid performance to youth with CU+CP and in some problems they were more similar to the Control group. It is possible that the variety of CU-only group's performance across easy problems reflex the moderate levels of impulsivity (Study 2; Fanti, 2013), as late performance indicates impulse control (Albert & Steinberg, 2011), whereas youth in the Control and CU+CP groups hold the poles of impulsivity levels (Study 2; Fanti, 2013). With performance indicating planning (Unterrainer, Rahm, Leonhart, Ruff, & Halsband, 2003), present findings suggest that CU groups share different planning across easy problems. Ishikawa, Raine, Lencz, Bihrlé, and Lacasse (2001) measured strategic planning by Wisconsin Card Sorting Task among successful and unsuccessful psychopaths, suggesting that successful psychopaths' high EF might be "protective" from engaging in criminality or caught up from the criminal justice system. This might be the case for the CU-only group, whereas planning ahead can be a

“protective” factor from developing antisocial behavior and evading punishment, as it was found in Study 1.

Additionally, regarding their performance in difficult problems, any differences between groups were minimized, proposing similar planning between groups, regardless of the level of CU or CP. In TOL difficult problems, participants must have in mind a pathway of their movements until the goal state, for which a normal working memory and a mature inhibitory processing system are needed. The findings are consistent with Pham et al. (2003)’s findings, who found that criminal psychopaths and control group did not differentiate regarding their initiation times during the 5-move difficult problem. Although the present groups were not different on their initiate time, youth in the control and CU-only group scored more trials correct than those in the CU+CP group, a result that Pham et al. (2003) and Bagshaw et al. (2014) found as well. It is also important to keep in mind the age of the participants, whereas adolescence is more associated with less future orientation and planning for future in general (Steinberg et al., 2009). More specific, it seems that individuals get better at planning with age, due to puberty and immaturity during adolescence (Albert & Steinberg, 2011). The CU-only group seems to differentiate in planning abilities compared to individuals with successful psychopathy, who tend to have more methodically planning, and puberty and immaturity might be a risk factor for this. This is important not only for explaining the developmental stages of successful psychopathy, but also for the importance of intervention to youth with CU-only prior adulthood.

**Decision making.** Furthermore, the tendency of youth with CU+CP on making decision based on rewards more than those with CU-only, suggests that there are differences within CU traits regarding sensitive to reward. Present behavioral findings are consistent with self-report findings (Study 2), whereas it is shown that youth with CU+CP were more sensitized to rewards compared to youth with CU-only. The reward-dominant style of youth with CU+CP (Barry et al., 2000) explains the present findings, whereas it is proposed that due to their normal or enhanced behavioral activation system (BAS; Fowles, 1980; 2006), a tendency to cues for rewards is more activated. At the same time CU groups seem to have a similar propensity towards risky decision-making. Schmauk (1970) found that individuals with psychopathy avoided tangible punishment as well as controls, especially when there was a monetary punishment (loss of money). Present findings not only validate the similarities between youth with CU traits and psychopathy, but also point out the importance of heterogeneity within CU traits. The heterogeneity within CU traits imply risk factors that may prevent CU-only youth engaging in antisocial behaviours,

while their ability to not be intimidated by gaining reward, for example positive emotional reinforcement during antisocial behaviours, makes them think more before making a risk decision, and consequently avoiding any kind of punishment (Study 1).

### **Intellectual Functioning**

**Verbal abilities.** In the task examining verbal abilities, even though youth with CU-only showed a tendency to score higher, there were no significant differences between the groups. Additionally no differences were found between CU groups and control group. While findings support that the expansion of a person's vocabulary is unrelated to the antisocial presentations or callousness of a person, they also suggest the existence of shared factors within control and CU groups. Combining the fact that both of CU groups score high on interpersonal characteristics (e.g. glibness, insincerity, lying, deception, conning, and manipulation), and interpersonal characteristics involve language (De Lisi et al., 2010; Munoz et al., 2008; Paulhus & Williams, 2002; Salekin et al., 2004; Vitacco et al., 2005), one would expect that those with CU traits, despite the level of CP, would have higher verbal abilities compared to control group. However, it has been argued, that even that this occurs, it does not mean that psychopaths have a good command of language but it is the way they use their words (Hare, Williamson, & Harpur, 1988). Consequently, it can be suggested that although one can have good verbal abilities, with a good expand on their vocabulary; it does not mean that they are also able to wield their words and effectively be able to charm, manipulate, deceive and con others. Additionally, De Lisi et al. (2010) suggested that Cleckley's idea on intelligence might have been affected by his sample and that there is little reason to believe that individuals with psychopathy have "good intelligence". This contradicting assumption leads inevitable to two implications: Firstly, that there is a confusion regarding verbal intelligence and psychopathy and extendable to CU traits, and secondly, to the necessity of more research on CU groups and different aspects of verbal intelligence.

**Nonverbal abilities.** Furthermore, youth with CU-only score higher on non-verbal abilities than youth with CU+CP, and similarly to Control group. This is consistent with the hypothesis that youth with CU+CP have weak non-verbal abilities (Loney et al., 1998). It is possible that studies which used full/total intelligent score (verbal and non verbal abilities), youth with CU+CP (De Birto et al., 2009) or incarcerated psychopathic individuals (Heinzen et al., 2011) scored lower than normal population, perhaps due to weak non-verbal abilities affecting the level of full/total score of individuals with CU or psychopathy. What is important is that non-verbal abilities has been negatively related to F2 of PCL-R within incarcerated population (Harpur et al., 1989), suggesting that deficits

in nonverbal abilities may underlie antisocial behavior/lifestyle in psychopathic population. It has also been proposed that deficits in IF are related to impulsivity and not antisocial behavior per se (Vitacco et al., 2008). In both ways, it seems that different risk factors appear between CU groups.

Consequently, present findings imply that youth with CU-only refrain CP/antisocial behavior or situations that will get them caught or punished, maybe due to normal nonverbal abilities. It is possible that these complex mental abilities help them process a situation or options, visualize and organize it on their mind and then make a decision that can be described as successful (e.g. avoiding punishment, Study 1). In the contrary, deficits in nonverbal abilities might be a risk factor for those with CU traits for developing CP or antisocial behavior and inevitably being convicted or punished repeatedly. Indeed, it was found that incarcerated individuals with psychopathy and with low full intelligence scores were more likely to have received a reconviction (Beggs & Grace, 2008), which is a common behavior for individuals with CU+CP (Study 1) and unsuccessful psychopathy (Widom, 1977).

### **Conclusion of Study 3**

By showing differences between CU groups, present findings suggest that heterogeneity within CU traits may be also underlined by executive and intellectual functioning. However, two things are rising regarding CU groups. First, it is still unclear whether deficits in EF and IF underlie regulation control or whether is an extra risk factor for distinguishing CU groups. It was found that there is a negative association between impulsivity and reasoning tasks (Schweizer, 2002), whereas verbal abilities are associated with interpersonal traits (Munoz et al., 2008; Paulhus & Williams, 2002; Salekin et al., 2004; Vitacco et al., 2005). On the other hand, Fanti et al. (under review) suggested that youth with CU-only have “greater self-regulation, and lesser propensity towards risky decision-making”. Future research might examine how abilities in EF, IF, temperament and self-regulation may develop different pathways to CU-only and CU+CP groups. Secondly, findings on both executive and intellectual functioning imply a main risk factor on whether those with CU traits will consequently engage or not in antisocial behaviour or get punished, based on their decision making. According to Gao and Raine (2010), it is possible that those with successful psychopathy may have intact or enhanced cognitive empathy, while those with unsuccessful psychopathy may have impaired decision making. Additionally, as Fanti et al. (under review) proposed, future research may examine whether CU-only group’s successful decision making is based in order to avoid punishment or avoid harming others due to their empathetic concern.

## General Discussion

In summary, the current project has important implications for conceptualizing youth with CU traits in the absence of co-occurring CP - a group that literature provides limited information on it. By exhibiting differences and similarities between youth with CU-only and youth with CU+CP, present findings emphasize the importance of heterogeneity within CU traits. Additionally, CU groups present specific profiles, which tend to be similar to the profiles that literature provides for individuals with successful and unsuccessful, supporting the idea of a downward extension of psychopathy to CU traits. Third, it is suggested that heterogeneity in CU groups may be due to risk factors similar to those suggested for explaining heterogeneity within psychopathy. Taken together, the present project leads to concerns whether the CU-only group is still at risk and important to stigmatize, since they reflect successful characteristics and skills compared to those within the CU+CP group.

### **CU profiles and the importance of heterogeneity**

The present project sheds light in the literature, carving different line of research by focusing on youth with CU traits in the absence of co-occurring CP. This is the first study that shows that youth with CU-only have a more successful way evading from antisocial behavior and punishment when antisocial behavior occurs, compared to those with CU+CP. Additionally, it is shown that this population although is similarly fearless, they are less reward-oriented and disinhibited than those with co-occurring CP. All findings support the theory that this group with CU traits can be more functional adapted within the normal population, compared to those with co-occurring CU+CP, who tend to be easily distinguished from the normal population due to their severe and stable aggression. This leads to fundamental questions whether CU-only youth should be considered as a pathological group in the absence of severe problems toward others. On the other hand, the fact that CU-only youth shares similar characteristics with normal population while having low levels of empathy might put them in the spotlight. It is possible that they may engage in normal population's behaviors and mannerisms, adapting in a way that it makes them not easily identified, while due to their low levels of empathy may engage in covert antisocial behaviours. Although no studies have examined whether their characteristics and functioning performance is mimicry of normal population, this chameleon effect (Chartrand & Bargh, 1999) might hide several danger for the society, supporting prior suggestions that this group is still in risk despite their low CP (Fanti, 2013; Rowe et al., 2010).

Adult literature suggests that individuals with successful psychopathy are successful on evading punishment and overt antisocial behavior, tend to be less disinhibited and more able to function compared to criminal psychopaths (see more in Gao & Raine, 2010). These suggestions align with the present profile of the CU-only group, providing evidence in the downward extension theory from psychopathy to CU traits. Individuals with successful psychopathy cost to the society since they tend to commit white-collar crimes (Babiak & Hare, 2006; Boddy, 2006) or crimes that fail to reach to prosecution (Widom, 1977), suggesting the importance of studying examining the developmental continuity from CU-only group to successful psychopathy. It is possible that youth with CU-only might develop similar covert antisocial behavior in adulthood, suggesting early identification of this population at risk. Alternatively, it is also possible that these individuals despite their low empathy may be needed in the society. Lykken proposed that similar fearless dominance is an underlying characteristic of some psychopaths and heroes (Lykken, 1982), and is associated to heroism (Smith, Lilienfeld, Coffey, & Dabbs, 2013) and leadership positions in organizations, and high-risk occupations, for example law enforcement, firefighting, and dangerous sports (Lilienfeld, Latzaman, Watts, Smith, & Dutton, 2014). Therefore, the question whether there is a need for treating psychopathy with successful outcomes still remains unanswered, if there is a possibility of not characterizing interpersonal–affective features of psychopathy as pathological in the absence of serious antisocial behavior (Hall & Benning, 2006).

Moreover, findings on youth with CU+CP support prior studies' findings while adding to the literature, providing more information on the profile of this population compared to the CU-only group. This group shows a more unsuccessful way evading from antisocial behavior and punishment, and a more dishinhibited and less functioning profile compared to CU-only group. In a better understanding of developmental processes contributing to CU traits when co-occurring with CP, it is suggested that the existence of impaired functioning processes may contribute to the antisocial presentation displayed by CU youth. Thus, differences in self-regulation, sensitivity to reward, narcissism and non-verbal abilities contribute to the development of therapeutic implications towards CP within CU traits. Additionally, the profile of CU+CP seems to entail core characteristics of individuals with unsuccessful psychopathy, suggesting resemblances between these two groups and a possible developmental continuity from youth with CU+CP to individuals with unsuccessful psychopathy. If this is the case, the present findings add important evidence on expanding prevention skills towards unsuccessful psychopathy.

### **Explaining Heterogeneity**

Aiming to provide evidence in heterogeneity within CU traits, the present project shows differences and similarities between CU groups, stepping further than the first definition of success - the co-occurrence or not of CP. Differences between CU groups in characteristics and functioning may imply the existence of common and different etiological processes within CU traits, suggesting investigation for several developmental pathways leading to the two groups. For the heterogeneity within psychopathy groups, Hall and Benning (2006) (see also Lilienfeld, Watts, & Smith, 2015) proposed three conceptual perspectives that posit distinct etiological processes between successful and unsuccessful psychopathy: (1) “Noncriminal psychopathy as a subclinical manifestation of the disorder” or the “differential-severity model”, (2) “Noncriminal psychopathy as a moderated expression of the full disorder” or the “moderated-expression model” and (3) “Noncriminal psychopathy from the dual-process perspective” or “differential-configuration model”. The perception of subclinical manifestation proposes that noncriminal psychopaths display less extreme psychopathic characteristics (i.e. subclinical psychopaths), sharing the same etiological process but at a reduced severity. The compensatory process perspective proposes that both psychopathic groups share common etiology and the differences in displaying antisocial behaviour are due to moderator factors intervening of their psychopathic temperaments. This moderator factors are usually characteristics, such as intelligence, executive function, educational opportunities or effective parenting, which protect psychopathic individuals to express antisocial behaviour. According to the dual-process perspective, interpersonal-affective features of psychopathy (i.e., CU and arrogant/deceitful interpersonal style) and the antisocial behaviour component (i.e., impulsive and irresponsible behavioral style) reflect distinct etiologies, namely fearlessness and deficient inhibitory control, respectively. It seems that this combination might give to the individual with psychopathic traits the ability to function adaptively in the society without experiencing legal problems. Taken that CU groups show similarities with psychopathy groups, the findings of the present project suggest that heterogeneity within CU traits may be explained by these theories.

Since “a synthesis of these perspectives may be achieved” (Hall & Benning, 2006, p. 474), it is proposed that due to their impaired regulated behavior and fearless rewarded temperament, youth with CU+CP have difficulties regulating their urge for antisocial behavior, where consequently leads to get punished. Impaired executive and cognitive function are possibly maintaining their behavior dysregulation, while it also makes it difficult to prevent evading punishment. On the other hand, the combination of fearless but less reward-oriented temperament and behavior inhibition gives the abilities to youth with

CU traits to know how to regulate their antisocial behavior and eventually not get themselves punished. At the same time, normal executive and cognitive function may protect this group by giving them the abilities to make future choices, consequently evading punishment successfully. Additionally, environmental factors, such as parenting practices and abuse, have been examined within CU traits, showing that they play important role in the development of antisocial behavior (e.g. Graham Kimonis, Wasserman, & Kline, 2012; Waller, Gardner, & Hyde, 2013).

### **Strengths, Limitations and Future Directions**

A variety of measures were used (interview, questionnaires and computerized tasks) as well as various areas of research (successfulness, individual characteristics, executive and intellectual functioning) for the constructs of this study, allowing a more thorough explication of CU heterogeneity. This project also helped to specify previous findings on youth with CU-only that were not so narrowed down, explaining the heterogeneity within CU traits and conceptualizing the group with CU-only. Using the criteria for the construct of success (i.e. avoiding antisocial behavior and punishment), the present project provides information on the resemblance of individual characteristics and executive/intellectual functioning between the CU groups and psychopathy groups. Beyond that, findings are also important for psychopathy literature, of which CU traits are one dimension capturing affective dysfunction. The results add to the limited previous evidence, whereas CU traits can be used as a downward extension for understanding the development of adult psychopathy (Frick & Ray, 2014) and it is believed to be a developmental precursor of adult psychopathy (e.g. Frick et al., 2003a).

While the present project represents a useful starting point for investigating the heterogeneity of CU traits and conceptualizing CU-only youth, results should be interpreted cautiously due to several study limitations. Firstly, a larger sample would increase the power to reliably detect smaller effect sizes and would allow for testing gender differences. In addition to measuring success, the present study focused only in evading antisocial behavior and punishment, whereas success within psychopathy can also be assessed based on evading institutionalization, social success (e.g. interpersonal/intrapersonal success and leadership) and violations' frequency (e.g. De Matteo et al., 2005). Due to the fact that individuals with CU traits tend to lie more, truthfulness in reports was ensured before the beginning of the research and during the interview by explaining the importance of confidentiality. Furthermore, even though that Vocabulary and Matrix Reasoning can be used for the construct of total intelligence, a more thorough investigation of the intellectual function could be a useful direction for future research.

Emotional difficulties or other DSM disorders (e.g. anxiety) and environmental factors, such as parenting practices, abuse and peer rejection are theorized to be associated with antisocial behaviour and CU traits within the CU+CP group (e.g. Fanti, Demetriou, & Kimonis, 2013; Frick & White, 2008; Moffitt et al., 2008), but there is limited information on CU-only group.

Moreover, there are more novel findings that need to be addressed by future work. First, the interview structure that was used for measuring success evading antisocial behaviour and/or punishment within adolescents needs further development. In order to ensure its application and generalization to the youth population, researchers should examine the nomological network, by testing it in a larger sample, ensuring truthfulness in reports (Shenton, 2004), and examining its validity. Additionally, youth with CU-only appears to share similar characteristics with adults with successful psychopathy, whereas youth with CU+CP appears to demonstrate behaviours of adults with unsuccessful psychopathy. Although these findings are in agreement with prior research, future studies need to examine these hypotheses by following the development of CU youth to adulthood or by comparing youth with CU traits (high and low CP) with adults with psychopathy (high and low antisocial behaviour). Additionally, the suggested perspective theories need to be examined in order to reveal whether there are multiple etiological pathways to this phenotype. Furthermore, the present study addressed the importance of knowing the risk of violence posed by CU-only group in the community and the need for studying the etiologies related to CU traits rather than to CP or antisocial behavior in general. Thus, this line of research may answer the fundamental questions regarding the nature of CU-only youth as pathological group, following by therapeutic implications.

Nevertheless, the present findings may enhance existing treatment efforts and point to avenues for new and creative interventions within CU traits. Not only by informing prevention skills for severe antisocial behaviour, based on characteristics of CU+CP youth who are at higher risk (e.g. Fanti, 2013; Rowe et al., 2010), but also by informing for prevention skills for the possible development of successful psychopathy. From one perspective, present findings promote self-regulation, sensitivity to reward, EF and nonverbal abilities as targets that could be useful for education material in interventions or preventions of CP. Moreover, treatment studies should consider skills on enhancing affection and decreasing manipulation, for those who are at high risk for developing characteristics similar to individuals with successful psychopathy.

## **General Conclusions**

By using multi-method assessment, important evidence for understanding and conceptualizing youth with CU traits, without co-occurring CP has been provided through this research. In the process of understanding this group, differences and similarities with those with co-occurring CP have been suggested, contributing to the heterogeneity within CU traits. It has also proposed that individual and neuropsychological processes may contribute to the successful way of evading antisocial presentations or punishment due to antisocial presentations, suggesting important implications in a line of future research for examining etiologies and developmental pathways between CU groups. At the same time, findings address the importance of examining CU groups and the necessity of keeping CU-only group in interest, in order to ensure whether there is a demand for treating CU-only without the co-occurrence of CP. Up till then, findings may be applied for therapeutic implications towards CP within CU traits. Importantly, using the downward extension theory in understanding CU traits based on psychopathy, present study provides validated information on the developmental continuity of CU traits to psychopathy, by suggesting possible resemblance between CU-only group and individuals with successful psychopathy.

## References

- Achenbach, T.M. (1991a). *Manual for the child behavior checklist/4–18 and 1991 profile*. Burlington, VT: Department of Psychiatry, University of Vermont.
- Achenbach, T.M. (1991b). *Manual for the youth self report and 1991 profile*. Burlington, VT: Department of Psychiatry, University of Vermont.
- Adolphs, R., Gosselin, F., & Buchanan, T. W., Tranel, D., Schyns, P., & Damasio, A. R. (2005). A mechanism for impaired fear recognition after amygdala damage. *Nature*, *433*, 68-72.
- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders, (DSM-5)*. American Psychiatric Pub.
- Albert, D., & Steinberg, L. (2011). Judgment and decision making in adolescence. *Journal of Research on Adolescence*, *21*(1), 211-224.
- Andreou, E. (2004). Bully/victim problems and their association with Machiavellianism and self-efficacy in Greek primary school children. *British Journal of Educational Psychology*, *74*(2), 297-309.
- Andrews, H., & Furnis, P. (2009). A successful leader or a psychopathic individual? *Management Services*, 22-24.
- Arefi, M. (2013). The relation between relational/overt aggression and prosocial behavior with Machiavellianism and empathy in Iranian primary school. *Global Journal of Guidance and Counselling*, *2*(2).
- Artz, S., Nicholson, D., & Magnuson, D. (2008). Examining sex differences in the use of direct and indirect aggression. *Gender Issues*, *25*(4), 267-288.
- Babiak, P. (1995). When psychopaths go to work: A case study of an industrial psychopath. *Applied Psychology*, *44*(2), 171-188.
- Babiak, P., & Hare, R. D. (2006). *Snakes in suits: When psychopaths go to work* (Paper ed.). New York: HarperBusiness.
- Babiak, P., Neumann, C. S., & Hare, R. D. (2010). Corporate psychopathy: Talking the walk. *Behavioral Sciences & the Law*, *28*(2), 174-193.
- Bagshaw, R., Gray, N. S., & Snowden, R. J. (2014). Executive function in psychopathy: The Tower of London, Brixton Spatial Anticipation and the Hayling Sentence Completion Tests. *Psychiatry research*, *220*(1), 483-489.
- Banich, M. T., Crowley, T. J., Thompson, L. L., Jacobson, B. L., Liu, X., Raymond, K. M., & Claus, E. D. (2007). Brain activation during the Stroop task in adolescents with severe substance and conduct problems: A pilot study. *Drug and alcohol dependence*, *90*(2), 175-182.
- Bari, A., & Robbins, T. W. (2013). Inhibition and impulsivity: Behavioral and neural basis of response control. *Progress in Neurobiology*, *108*, 44-79.
- Barker, E. D., Oliver, B. R., Viding, E., Salekin, R. T., & Maughan, B. (2011). The impact of prenatal maternal risk, fearless temperament and early parenting on adolescent callous-unemotional traits: a 14-year longitudinal investigation. *Journal of Child Psychology and Psychiatry*, *52*(8), 878-888.
- Barry, C. T., Frick, P. J., DeShazo, T. M., McCoy, M., Ellis, M., & Loney, B. R. (2000). The importance of callous–unemotional traits for extending the concept of psychopathy to children. *Journal of Abnormal Psychology*, *109*(2), 335–340.
- Barry, C. T., Frick, P. J., & Killian, A. L. (2003). The relation of narcissism and self-esteem to conduct problems in children: A preliminary investigation. *Journal of Clinical Child and Adolescent Psychology*, *32*(1), 139-152.
- Barry, C. T., Guelker, M., & Wallace, M. (2011). Developmental and theoretical influences on the conceptualization and assessment of youth narcissism. In C. Barry, P. Kerig, K. Stellwagen & T. Barry (Eds.), *The emergence of “dark” personalities: Early manifestations of narcissism and Machiavellianism*. Washington: APA Press.

- Bauer, D. L., Whitman, L. A., & Kosson, D. S. (2011). Reliability and Construct Validity of Psychopathy Checklist Youth Version Scores Among Incarcerated Adolescent Girls. *Criminal justice and behavior*, 38(10), 965-987.
- Bechara, A., Damasio, A. R., Damasio, H., & Anderson, S. W. (1994). Insensitivity to future consequences following damage to human prefrontal cortex. *Cognition*, 50(1), 7-15.
- Beggs, S. M., & Grace, R. C. (2008). Psychopathy, intelligence, and recidivism in child molesters evidence of an interaction effect. *Criminal Justice and Behavior*, 35(6), 683-695.
- Berkowitz, L. (1993). *Aggression: Its causes, consequences, and control*. McGraw-Hill Book Company.
- Blackburn, J. F. (Ed.). (1969). *Fluid power control*. Massachusetts Institute of Technology, The MIT Press.
- Blair, R. J. R. (2001). Neurocognitive models of aggression, the antisocial personality disorders, and psychopathy. *Journal of Neurology, Neurosurgery & Psychiatry*, 71, 727-731.
- Blair, J. (2006). Subcortical brain systems in psychopathy: The amygdale and associated structures. In C. J. Patrick (Ed.). *Handbook of psychopathy* (pp. 296-312, paper ed.). NY: Guilford Press.
- Blair, R. J. R., Colledge, E., & Mitchell, D. G. (2001). Somatic markers and response reversal: Is there orbitofrontal cortex dysfunction in boys with psychopathic tendencies? *Journal of Abnormal Child Psychology*, 29, 499-511.
- Blair, R. J. R., Jones, L., Clark, F., & Smith, M. (1997). The psychopathic individual: A lack of responsiveness to distress cues? *Psychophysiology*, 34, 192-8.
- Blair, R. J. R., Mitchell, D., & Blair, K. (2005). *The Psychopath: Emotion and the Brain*. Oxford, England: Wiley-Blackwell.
- Boddy, C. R. (2006). The dark side of management decisions: organisational psychopaths. *Management Decision*, 44(10), 1461 - 1475.
- Boddy, C. R., Ladyshevsky, R. K., & Galvin, P. (2010). The influence of corporate psychopaths on corporate social responsibility and organizational commitment to employees. *Journal of Business Ethics*, 97(1), 1-19.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative research in psychology*, 3(2), 77-101.
- Capaldi, D. M., & Rothbart, M. K. (1992). Development and validation of an early adolescent temperament measure. *The Journal of Early Adolescence*, 12(2), 153-173.
- Carver, C. S., & White, T. L. (1994). Behavioral inhibition, behavioral activation, and affective responses to impending reward and punishment: The BIS/BAS scales. *Journal of personality and social psychology*, 67(2), 319.
- Caspi, A., & Bem, D. (1990). Personality continuity and change across the life course. In L. Pervin, (ed.), *Handbook of Personality: Theory and Research* (pp. 549-575). NY: Guilford Press.
- Cauffman, E., Kimonis, E. R., Dmitrieva, J., & Monahan, K. C. (2009). A multimethod assessment of juvenile psychopathy: Comparing the predictive utility of the PCL: YV, YPI, and NEO PRI. *Psychological Assessment*, 21(4), 528.
- Cauffman, E., Shulman, E. P., Steinberg, L., Claus, E., Banich, M. T., Graham, S., & Woolard, J. (2010). Age differences in affective decision making as indexed by performance on the Iowa Gambling Task. *Developmental Psychology*, 46(1), 193.
- Chartrand, T. L., & Bargh, J. A. (1999). The chameleon effect: The perception-behavior link and social interaction. *Journal of Personality and Social Psychology*, 76(6), 893-910.

- Christie, R., & Geis, F. L. (1970). *Studies in Machiavellianism*. New York: Academic Press.
- Cima, M., & Raine, A. (2009). Distinct characteristics of psychopathy relate to different subtypes of aggression. *Personality and individual differences*, 47(8), 835-840.
- Cleckley, H. M. (1988). *The Mask of Sanity: An Attempt to Clarify Some Issues About the So Called Psychopathic Personality* (5th ed.). Saint Louis: Mosby.
- Coie, J. D., & Dodge, K. A. (1998). Aggression and antisocial behavior. In D. William & E. Nancy (Eds), *Handbook of child psychology*, 5th ed.: Vol 3., (pp. 779-862). Hoboken, NJ, US: John Wiley & Sons Inc.
- Colder, C. R., & O' Connor, R. M. (2004). Gray's reinforcement sensitivity model and child psychopathology: Laboratory and questionnaire assessment of the BAS and BIS. *Journal of Abnormal Child Psychology*, 32(4), 435-451.
- Cooke, D. J., & Michie, C. (2001). Refining the construct of psychopathy: Towards a hierarchical model. *Psychological assessment*, 13(2), 171.
- Corry, N., Merritt, R. D., Mrug, S., & Pamp, B. (2008). The factor structure of the Narcissistic Personality Inventory. *Journal of Personality Assessment*, 90(6), 593-600.
- Coyne, S. M., & Thomas, T. J. (2008). Psychopathy, aggression, and cheating behavior: A test of the Cheater–Hawk hypothesis. *Personality and Individual Differences*, 44(5), 1105-1115.
- Crick, N. R., & Dodge, K. A. (1996). Social information-processing mechanisms in reactive and proactive aggression. *Child Development*, 67(3), 993-1002.
- Crick, N. R., & Grotpeter, J. K. (1995). Relational aggression, gender, and social-psychological adjustment. *Child Development*, 66(3), 710-722.
- Dadds, M. R., & Salmon, K. (2003). Punishment insensitivity and parenting: Temperament and learning as interacting risks for antisocial behavior. *Clinical child and family psychology review*, 6(2), 69-86.
- De Brito, S. A., Mechelli, A., Wilke, M., Laurens, K. R., Jones, A. P., Barker, G. J., ... & Viding, E. (2009). Size matters: Increased grey matter in boys with conduct problems and callous–unemotional traits. *Brain*, awp011.
- Deeley, Q., Daly, E., Suguladze, S., Tunstall, N., Mezey, G., Beer, D. et al (2006). Facial emotion processing in criminal psychopathy: preliminary functional magnetic response imaging study. *British Journal of psychiatry*, 189, 533-539.
- DeLisi, M., Vaughn, M. G., Beaver, K. M., & Wright, J. P. (2010). The Hannibal Lecter myth: psychopathy and verbal intelligence in the MacArthur violence risk assessment study. *Journal of Psychopathology and Behavioral Assessment*, 32(2), 169-177.
- DeMatteo, D., Heilbrun, K., & Marczyk, G. (2005). Psychopathy, risk of violence, and protective factors in a noninstitutionalized and noncriminal sample. *International Journal of Forensic Mental Health*, 4(2), 147-157.
- Dunkel, F. (2014). Juvenile justice in Europe – Reform developments between justics, welfare and ‘new puniteveness’. *Kriminologijos Studijos, (Vilnius/Litauen)*, 31-76, ISSN 2351-6097.
- Dünel, F., Grzywa, J., Horsfield, P., & Pruin, I. (2011). *Juvenile Justice Systems in Europe – Current Situation and Reform Developments*, (2nd ed.). Mönchengladbach: Forum Verlag Godesberg.
- Ellis, L. K., & Rothbart, M. K. (1999). *Early Adolescent Temperament questionnaire – Revised: Parent Report* [Unpublished questionnaire]. Retrieved from <http://www.bowdoin.edu/~sputnam/rothbart-temperament-questionnaires/>
- Ermer, E., & Kiehl, K. A. (2010). Psychopaths are impaired in social exchange and precautionary reasoning. *Psychological science*.

- Erkut, S. (2010). Developing multiple language versions of instruments for intercultural research. *Child Development Perspectives*, 4(1), 19-24.
- Essau, C. A., Sasagawa, S., & Frick, P. J. (2006). Callous-unemotional traits in a community sample of adolescents. *Assessment*, 13(4), 454-469.
- Fanti, K. A. (2013). Individual, social, and behavioral factors associated with co-occurring conduct problems and callous-unemotional traits. *Journal of Abnormal Child Psychology*, 41(5), 811-824.
- Fanti, K. A., Demetriou, C. A., & Kimonis, E. R. (2013). Variants of callous-unemotional conduct problems in a community sample of adolescents. *Journal of youth and adolescence*, 42(7), 964-979.
- Fanti, K. A., Frick, P. J., & Georgiou, S. (2009). Linking callous-unemotional traits to instrumental and non-instrumental forms of aggression. *Journal of Psychopathology and Behavioral Assessment*, 31(4), 285-298.
- Fanti, K. A., & Kimonis, E. R. (2012). Bullying and Victimization: The Role of Conduct Problems and Psychopathic Traits. *Journal of Research on Adolescence*, 22(4), 617-631.
- Fanti, K. A., Kimonis, E. R., Hadjicharalambous, M., & Steinberg, L. (in review). Do neurocognitive deficits in decision making differentiate conduct disorder subtypes? *European Child and Adolescent Psychiatry*.
- Fanti, K. A., Panayiotou, G., Lazarou, C., Michael, R. & Georgiou, G. (2015). The better of two evils? Evidence that conduct problem children with or without callous-unemotional traits score on opposite directions on physiological and behavioral measures of fearfulness. *Development and Psychopathology*.
- Farrington, D. P. (2005). Childhood origins of antisocial behavior. *Clinical Psychology & Psychotherapy*, 12(3), 177-190.
- Fontaine, N. M. G., McCrory, E. J. P., Boivin, M., Moffitt, T. E., & Viding, E. (2011). Predictors and outcomes of joint trajectories of callous-unemotional traits and conduct problems in childhood. *Journal of Abnormal Psychology*, 120(3), 730-742.
- Forsman, M., Lichtenstein, P., Andershed, H., & Larsson, H. (2008). Genetic effects explain the stability of psychopathic personality from mid- to late adolescence. *Journal of Abnormal Psychology*, 117 (3), 606-617.
- Forth, A. E., & Flight, J. I. (2007). Instrumentally violent youth: The roles of psychopathic traits, empathy, and attachment. *Criminal Justice and Behavior*.  
Doi:10.1177/0093854807299462
- Fowles, D. C. (1980). The three arousal model: Implications of Gray's two-factor learning theory for heart rate, electrodermal activity, and psychopathy. *Psychophysiology*, 17(2), 87-104.
- Fowles, D. C. (2006). Jeffrey Gray's contributions to theories of anxiety, personality, and psychopathology. *Biology of personality and individual differences*, 7-34.
- Fowles, D. C., & Kochanska, G. (2000). Temperament as a moderator of pathways to conscience in children: The contribution of electrodermal activity. *Psychophysiology*, 37(06), 788-795.
- Frick, P. J. (1998). *Conduct Disorders and Severe Antisocial Behavior*. NY: Plenum Publishing Corporation.
- Frick, P. J. (2004). Developmental pathways to conduct disorder: Implications for serving youth who show severe aggressive and antisocial behavior. *Psychology in the Schools*, 41(8), 823-834.
- Frick, P. J. (2009). Extending the construct of psychopathy to youth: Implications for understanding, diagnosing, and treating antisocial children and adolescents. *Canadian Journal of Psychiatry/Revue canadienne de psychiatrie*, 31(12), 803.

- Frick, P. J., Cornell, A. H., Barry, C. T., Bodin, S. D., & Dane, H. E. (2003a). Callous-Unemotional Traits and Conduct Problems in the Prediction of Conduct Problem Severity, Aggression, and Self-Report of Delinquency. *Journal of Abnormal Child Psychology*, *31*(4), 457–470.
- Frick, P. J., Cornell, A. H., Bodin, S. D., Dane, H. E., Barry, C. T., & Loney, B. R. (2003b). Callous-unemotional traits and developmental pathways to severe conduct problems. *Developmental Psychology*, *39*(2), 246–260.
- Frick, P. J., & Hare, R. D. (2001). *The Antisocial Process Screening Device*. Toronto: Multi-Health Systems.
- Frick, P. J., Kimonis, E. R., Dandreaux, D. M., & Farrell, J. M. (2003). The 4 year stability of psychopathic traits in non-referred youth. *Behavioral Sciences & the Law*, *21*(6), 713-736.
- Frick, P. J., & Morris, A. S. (2004). Temperament and developmental pathways to conduct problems. *Journal of Clinical Child and Adolescent Psychology*, *33*(1), 54-68.
- Frick, P. J., & Ray, J. V. (2014). Evaluating callous-unemotional traits as a personality construct. *Journal of personality*. DOI: 10.1111/jopy.12114
- Frick, P. J., Stickle, T. R., Dandreaux, D. M., Farrell, J. M., & Kimonis, E. R. (2005). Callous–Unemotional Traits in Predicting the Severity and Stability of Conduct Problems and Delinquency. *Journal of Abnormal Child Psychology*, *33*(4), 471–487.
- Frick, P. J., & White, S. F. (2008). Research review: The importance of callous-unemotional traits for developmental models of aggressive and antisocial behavior. *Journal of Child Psychology and Psychiatry*, *49*(4), 359-375.
- Gao, Y., & Raine, A. (2010). Successful and unsuccessful psychopaths: A neurobiological model. *Behavioral Sciences & the Law*, *28*(2), 194–210.
- Gardner, T. W., Dishion, T. J., & Connell, A. M. (2008). Adolescent self-regulation as resilience: Resistance to antisocial behavior within the deviant peer context. *Journal of abnormal child psychology*, *36*(2), 273-284.
- Garner, J. K. (2009). Conceptualizing the relations between executive functions and self-regulated learning. *The Journal of Psychology*, *143*(4), 405-426.
- Graham, N., Kimonis, E. R., Wasserman, A. L., & Kline, S. M. (2012). Associations among childhood abuse and psychopathy facets in male sexual offenders. *Personality Disorders: Theory, Research, and Treatment*, *3*(1), 66.
- Gray, J. A. (1970). The psychophysiological basis of introversion-extraversion. *Behaviour research and therapy*, *8*(3), 249-266.
- Gray, J. A. (1982). *The neuropsychology of anxiety: An enquiry into the functions of the septo-hippocampal system*. Oxford: Oxford University Press.
- Gray, J. A. (1991). The neuropsychology of temperament. In J. Strelau & A. Angleitner (Eds.) *Exploration in temperament: International perspective on theory and measurement* (pp. 105-128). Springer, US.
- Hall, J. R., & Benning, S. D. (2006). The “successful” psychopath: Adaptive and subclinical manifestations of psychopathy in the general population. *The Handbook of Psychopathy* (Paper ed.). New York: The Guilford Press.
- Hare, R. D. (1991). *The Hare psychopathy checklist-revised: Manual*. Multi-Health Systems, Incorporated.
- Hare, R. D. (1993). *Without Conscience: The Disturbing World of the Psychopaths Among Us*. New York: The Guilford Press.
- Hare, R. D. (1998). Psychopaths and their nature: Implications for the Mental Health and Criminal Justice Systems. *Psychopathy: Antisocial, Criminal and Violence Behaviour* (Paper ed., pp. 188–212). New York: The Guilford Press.
- Hare, R. D. (2003). *Manual for the Revised Psychopathy Checklist* (2nd ed.). Toronto, ON, Canada: Multi-Health Systems.

- Hare, R. D., & Neumann, C. S. (2010). The role of antisociality in the psychopathy construct: Comment on Skeem and Cooke. *Psychological Assessment, 22*(2), 446-454.
- Hare, R. D., Williamson, S. E., & Harpur, T. J. (1988). Psychopathy and language. In *Biological contributions to crime causation* (pp. 68-92). Netherlands: Springer.
- Harpur, T. J., Hare, R. D., & Hakstian, A. R. (1989). Two-factor conceptualization of psychopathy: Construct validity and assessment implications. *Psychological Assessment: A Journal of Consulting and Clinical Psychology, 1*(1), 6-17.
- Hart, S. D., Cox, D. N., & Hare, R. D. (2005). *Hare Psychopathy Checklist-Screening Version:(PCL: SV)*. MHS, Multi-Health Systems.
- Heinzen, H., Köhler, D., Godt, N., Geiger, F., & Huchzermeier, C. (2011). Psychopathy, intelligence and conviction history. *International journal of law and psychiatry, 34*(5), 336-340.
- Hiatt, K. D., Schmitt, W. A., & Newman, J. P. (2004). Stroop tasks reveal abnormal selective attention among psychopathic offenders. *Neuropsychology, 18*(1), 50-59.
- Hinson, J. M., Jameson, T. L., & Whitney, P. (2003). Impulsive decision making and working memory. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 29*(2), 298-306.
- Ishikawa, S. S., Raine, A., Lencz, T., Bihle, S., & Lacasse, L. (2001). Autonomic stress reactivity and executive functions in successful and unsuccessful criminal psychopaths from the community. *Journal of Abnormal Psychology, 110*(3), 423-432.
- Johansson, P., & Kerr, M. (2005). Psychopathy and intelligence: A second look. *Journal of personality disorders, 19*(4), 357-369.
- Jones, A. P., Laurens, K. R., Herba, C. M., Barker, G. J., & Viding, E. (2009). Amygdala hypoactivity to fearful faces in boys with conduct problems and callous-unemotional traits.
- Kagan, J., Reznick, J. S., & Snidman, N. (1987). The physiology and psychology of behavioral inhibition in children. *Child development, 1459-1473*.
- Kerig, P. K., & Stellwagen, K. K. (2010). Roles of callous-unemotional traits, narcissism, and Machiavellianism in childhood aggression. *Journal of Psychopathology and Behavioral Assessment, 32*(3), 343-352.
- Kiehl, K. A., Smith, A. M., Hare, R. D., Mendrek, A., Forster, B. B., Brink, J., & Liddle, P. F. (2001). Limbic abnormalities in affective processing by criminal psychopaths as revealed by functional magnetic resonance imaging. *Biological psychiatry, 50*(9), 677-684.
- Kimonis, E. R., Fanti, K. A., Frick, P. J., Moffitt, T. E., Essau, C., Bijttebier, P., & Marsee, M. A. (2014). Using self-reported callous-unemotional traits to cross-nationally assess the DSM-5 'With Limited Prosocial Emotions' specifier. *Journal of Child Psychology and Psychiatry*.
- Kimonis, E. R., Fanti, K., Goldweber, A., Marsee, M. A., Frick, P. J., & Cauffman, E. (2014). Callous-unemotional traits in incarcerated adolescents. *Psychological assessment, 26*(1), 227.
- Kimonis, E. R., Frick, P. J., Fazekas, H., & Loney, B. R. (2006). Psychopathy, aggression, and the processing of emotional stimuli in non-referred girls and boys. *Behavioral sciences & the law, 24*(1), 21-37.
- Kimonis, E. R., Frick, P. J., Skeem, J. L., Marsee, M. A., Cruise, K., Munoz, L. C., ... & Morris, A. S. (2008). Assessing callous-unemotional traits in adolescent offenders: Validation of the Inventory of Callous-Unemotional Traits. *International journal of law and psychiatry, 31*(3), 241-252.

- Kirkman, C. A. (2002). Non-incarcerated psychopaths: why we need to know more about the psychopaths who live amongst us. *Journal of Psychiatric and Mental Health Nursing*, 9(2), 155-160.
- Kochanska, G. (1993). Toward a synthesis of parental socialization and child temperament in early development of conscience. *Child Development*, 64(2), 325-347.
- Kochanska, G. (1995). Children's temperament, mothers' discipline, and security of attachment: Multiple pathways to emerging internalization. *Child Development*, 66(3), 597-615.
- Kockler, T. R., & Stanford, M. S. (2008). Using a clinically aggressive sample to examine the association between impulsivity, executive functioning, and verbal learning and memory. *Archives of Clinical Neuropsychology*, 23(2), 165-173.
- Kohls, G., Peltzer, J., Herpertz-Dahlmann, B., & Konrad, K. (2009). Differential effects of social and non-social reward on response inhibition in children and adolescents. *Developmental Science*, 12 (4), 614-625.
- Lau, K. S. L. (2010). *Exploring narcissism, psychopathy, and Machiavellianism in youth: An examination of association with antisocial behavior and aggression*. Unpublished master's thesis, University of British Columbia, New Orleans.
- Leist, T., & Dadds, M. R. (2009). Adolescents' ability to read different emotional faces relates to their history of maltreatment and type of psychopathology. *Clinical and Child Psychology and Psychiatry*, 14(2), 237-250.
- Levenston, G. K., Patrick, C. J., Bradley, M. M., & Lang, P. J. (2000). The psychopath as observer: emotion and attention in picture processing. *Journal of Abnormal Psychology*, 109, 373-86.
- Lilienfeld, S. O., Watts, A. L., & Smith, S. F. (2015). Successful Psychopathy A Scientific Status Report. *Current Directions in Psychological Science*, 24(4), 298-303.
- Loeber, R., Burke, J., & Pardini, D. A. (2009). Perspectives on oppositional defiant disorder, conduct disorder, and psychopathic features. *Journal of Child Psychology and Psychiatry*, 50(1-2), 133-142.
- Logan, G. D., Schachar, R. J., & Tannock, R. (1997). Impulsivity and inhibitory control. *Psychological Science*, 8(1), 60-64.
- Loney, B. R., Frick, P. J., Ellis, M., & McCoy, M. G. (1998). Intelligence, callous-unemotional traits, and antisocial behavior. *Journal of Psychopathology and Behavioral Assessment*, 20(3), 231-247.
- Loney, B. R., Taylor, J., Butler, M. A., & Iacono, W. G. (2007). Adolescent psychopathy features: 6-year temporal stability and the prediction of externalizing symptoms during the transition to adulthood. *Aggressive Behavior*, 33(3), 242-252.
- Loving, J. L. (2002). Treatment planning with the Psychopathy Checklist-Revised (PCL-R). *International Journal of Offender Therapy and Comparative Criminology*, 46(3), 281-293.
- Luengo, M. A., Carrillo-De-La-Pena, M. T., Otero, J. M., & Romero, E. (1994). A short-term longitudinal study of impulsivity and antisocial behavior. *Journal of Personality and Social Psychology*, 66(3), 542.
- Luria, A. R. (1980). *Higher cortical functions in man* (2nd ed.). New York: Basic.
- Lykken, D. T. (1957). A study of anxiety in the sociopathic personality. *The Journal of Abnormal and Social Psychology*, 55(1), 6.
- Lykken, D. T. (1995). *The antisocial personalities*. Hillsdale, NJ: Erlbaum.
- Lykken, D. T. (1982). Fearlessness: Its carefree charm and deadly risks. *Psychology Today*, 16, 20-28.
- Lynam, D. R., Charnigo, R., Moffitt, T. E., Raine, A., Loeber, R., & Stouthamer-Loeber, M. (2009). The Stability of Psychopathy Across Adolescence. *Development and Psychopathology*, 21(4), 1133-1153.

- MacLeod, C. M. (1991). Half a century of research on the Stroop effect: An integrative review. *Psychological bulletin*, 109(2), 163.
- Mahmut, M. K., Homewood, J., & Stevenson, R. J. (2008). The characteristics of non-criminals with high psychopathy traits: Are they similar to criminal psychopaths? *Journal of Research in Personality*, 42(3), 679-692.
- Marsee, M. A., Barry, C. T., Childs, K. K., Frick, P. J., Kimonis, E. R., Munoz, L. C., ... & Lau, K. S. (2011). Assessing the forms and functions of aggression using self-report: Factor structure and invariance of the Peer Conflict Scale in youths. *Psychological Assessment*, 23 (3), 792-804.
- Marsee, M. A., & Frick, P. J. (2007). Exploring the cognitive and emotional correlates to proactive and reactive aggression in a sample of detained girls. *Journal of Abnormal Child Psychology*, 35, 969-981.
- Marsh, A. A., Finger, E. C., Mitchell, D. G., Reid, M. E., Sims, C., Kosson, D. S., ... & Blair, R. J. R. (2008). Reduced amygdala response to fearful expressions in children and adolescents with callous-unemotional traits and disruptive behavior disorders.
- Martunnen, M. (2008). Juvenile criminal justice: Comparative and criminal policy perspective on sanctioning juveniles. *National Research Institute of Legal Policy*, 236, 451-464.
- Marsh, A. A. & Blair, R. J. R. (2008). Deficits in facial affect recognition among antisocial populations: A meta-analysis. *Neuroscience and Biobehavior Reviews*, 32, 454-465.
- Maxwell, B. (1996). Translation and cultural adaptation of the survey instruments. *Third international mathematics and science study (TIMSS) technical report, 1*, 159-169.
- Michon, K. (2014.). Juvenile court sentencing options: Typical punishment and penalties for juvenile delinquents and youth offenders [Web log message]. Retrieved from <http://www.nolo.com/legal-encyclopedia/juvenile-court-sentencing-options-32225.html>
- Miller, J., Flory, K., Lynam, D., & Leukefeld, C. (2003). A test of the four-factor model of impulsivity-related traits. *Personality and Individual Differences*, 34(8), 1403-1418.
- Mitchell, D. G., Colledge, E., Leonard, A., & Blair, R. J. R. (2002). Risky decisions and response reversal: Is there evidence of orbitofrontal cortex dysfunction in psychopathic individuals?. *Neuropsychologia*, 40(12), 2013-2022.
- Moeller, F. G., Barratt, E. S., Dougherty, D. M., Schmitz, J. M., Swann, A. C. (2001). Psychiatric aspects of impulsivity. *The American Journal of Psychiatry*, 158(11), 1783-1793.
- Moffitt, T. E. (1993). Adolescence-limited and life-course-persistent antisocial behavior: a developmental taxonomy. *Psychological review*, 100(4), 674.
- Moffitt, T. E., Arseneault, L., Jaffee, S. R., Kim-Cohen, J., Koenen, K. C., Odgers, C. L., Slutske, W. S., & Viding E. (2008). Research Review: DSM-V conduct disorder: research needs for an evidence base. *Journal of Child Psychology and Psychiatry*, 49(1), 3-33.
- Morgan, A. B., & Lilienfeld, S. O. (2000). A meta-analytic review of the relation between antisocial behavior and neuropsychological measures of executive function. *Clinical psychology review*, 20(1), 113-136.
- Mullins-Nelson, J. L., Salekin, R. T., & Leistico, A. M. R. (2006). Psychopathy, empathy, and perspective-taking ability in a community sample: Implications for the successful psychopathy concept. *International Journal of Forensic Mental Health*, 5(2), 133-149.

- Mullins-Sweatt, S. N., Glover, N. G., Derefinko, K. J., Miller, J. D., Widiger, T. A. (2010). The search for the successful psychopath. *Journal of Research in Personality, 44*, 554-558.
- Muñoz, L. C., Frick, P. J., Kimonis, E. R., & Aucoin, K. J. (2008). Types of aggression, responsiveness to provocation, and callous-unemotional traits in detained adolescents. *Journal of Abnormal Child Psychology, 36*(1), 15-28.
- Munthen, L. K., & Munthen, B. O. (2010). *Mplus user's guide* (6th ed.). Los Angeles, CA: Munthen & Munthen.
- Muris, P., & Meesters, C. (2009). Reactive and regulative temperament in youths: Psychometric evaluation of the Early Adolescent Temperament Questionnaire-Revised. *Journal of Psychopathology and Behavioral Assessment, 31*(1), 7-19.
- Muris, P., Meesters, C., de Kanter, E., & Timmerman, P. E. (2005). Behavioural inhibition and behavioural activation system scales for children: relationships with Eysenck's personality traits and psychopathological symptoms. *Personality and Individual Differences, 38*(4), 831-841.
- Nachamie, S. (1969). *Machiavellianism in children: The children's Mach scale and the bluffing game*. Unpublished doctoral dissertation, Columbia University.
- Newman, J. P., MacCoon, D. G., Vaughn, L. J., & Sadeh, N. (2005). Validating a distinction between primary and secondary psychopathy with measures of Gray's BIS and BAS constructs. *Journal of Abnormal Psychology, 114*(2), 319-323.
- Newman, J. P., Schmitt, W. A., & Voss, W. D. (1997). The impact of motivationally neutral cues on psychopathic individuals: assessing the generality of the response modulation hypothesis. *Journal of Abnormal Psychology, 106*(4), 563.
- O'Brien, B. S., & Frick, P. J. (1996). Reward dominance: Associations with anxiety, conduct problems, and psychopathy in children. *Journal of Abnormal Child Psychology, 24*(2), 223-240.
- Pardini, D. A., Lochman, J. E., & Frick, P. J. (2003). Callous/unemotional traits and social-cognitive processes in adjudicated youths. *Journal of the American Academy of Child & Adolescent Psychiatry, 42*(3), 364-371.
- Paulhus, D. L., & Williams, K. M. (2002). The dark triad of personality: Narcissism, Machiavellianism, and psychopathy. *Journal of research in personality, 36*(6), 556-563.
- Peters, E., & Slovic, P. (2000). The springs of action: Affective and analytical information processing in choice. *Personality and Social Psychology Bulletin, 26*(12), 1465-1475.
- Pham, T. H., Vanderstucken, O., Philippot, P., & Vanderlinden, M. (2003). Selective attention and executive functions deficits among criminal psychopaths. *Aggressive Behavior, 29*(5), 393-405.
- Poulin, F., & Boivin, M. (2000). Reactive and proactive aggression: Evidence of a two-factor model. *Psychological assessment, 12*(2), 115.
- Puckett, M. B., Aikins, J. W., & Cillessen, A. H. (2008). Moderators of the association between relational aggression and perceived popularity. *Aggressive Behavior, 34*(6), 563-576.
- Quinn, P. D., & Fromme, K. (2010). Self-regulation as a protective factor against risky drinking and sexual behavior. *Psychology of Addictive Behaviors, 24*(3), 376.
- Raine, A. (2002). Biosocial studies of antisocial and violent behavior in children and adults: A review. *Journal of Abnormal Child Psychology, 30*, 95-113. Raine, A., Dodge, K., Loeber, R., Gatzke-Kopp, L., Lynam, D., Reynolds, C., Stouthamer-Loeber, M., & Liu, J. (2006). The reactive-proactive aggression questionnaire: Differential correlates of reactive and proactive aggression in adolescent boys. *Aggressive Behavior, 32*, 159-171.

- Repacholi, B., Slaughter, V., Pritchard, M., & Gibbs, V. (2003). Theory of mind, Machiavellianism, and social functioning in childhood. In B. Repacholi & V. Slaughter (Eds.), *Individual differences in theory of mind* (pp. 67–97). NY: Psychology Press.
- Roelofs, A. (2003). Goal-referenced selection of verbal action: modeling attentional control in the Stroop task. *Psychological review*, *110*(1), 88.
- Rosenblatt, G. F., & Hannum, T. E. (1969). Relationship between Machiavellianism and sociopathy in an incarcerated female population. *Correctional Psychologist*, *3*, 16–22.
- Rothbart, M. K., & Bates, J. E. (1998). Temperament. In W. Damon (Ed.), *Handbook of child psychology: Vol. 3. Social, emotional, and personality development* (pp. 105–176). New York: Wiley.
- Rothbart, M. K., Ellis, L. K., & Posner, M. I. (2004). Temperament and self-regulation. In R. F. Baumeister & K. D. Vohs (Eds.), *Handbook of self-regulation: research, theory, and applications* (pp. 357–370). New York: Guilford Press.
- Roussos, A., Francis, K., Zoubou, V., Kiprianos, S., Prokopiou, A., & Richardson, C. (2001). The standardization of Achenbach's Youth Self-Report in Greece in a national sample of high school students. *European Child & Adolescent Psychiatry*, *10*(1), 47–53.
- Rowe, R., Maughan, B., Moran, P., Ford, T., Briskman, J., & Goodman, R. (2010). The role of callous and unemotional traits in the diagnosis of conduct disorder. *Journal of Child Psychology and Psychiatry*, *51*(6), 688–695.
- Salekin, R. T. (2006). Psychopathy in children and adolescents: Key issues in conceptualization and assessment. In C. J. Patrick (Ed.), *Handbook of psychopathy* (pp. 389–414). New York: Guilford.
- Salekin, R. T., Neumann, C. S., Leistico, A.-M. R., & Zalot, A. A. (2004). Psychopathy in youth and intelligence: An investigation of Cleckley's hypothesis. *Journal of Clinical Child & Adolescent Psychology*, *33*(4), 731–742.
- Schmuck, F. J. (1970). Punishment, arousal, and avoidance learning in sociopaths. *Journal of abnormal psychology*, *76*(3p1), 325.
- Schweizer, K. (2002). Does impulsivity influence performance in reasoning? *Personality and Individual Differences*, *33* (7), 1031–1043.
- Sebastian, C. L., McCrory, E. J., Cecil, C. A., Lockwood, P. L., De Brito, S. A., Fontaine, N. M., & Viding, E. (2012). Neural responses to affective and cognitive theory of mind in children with conduct problems and varying levels of callous-unemotional traits. *Archives of General Psychiatry*, *69*(8), 814–822.
- Shallice, T. (1982). Specific impairments of planning. *Philosophical Transactions of the Royal Society of London*, *B298*, 199–209.
- Shenton, A. K. (2004). Strategies for ensuring trustworthiness in qualitative research projects. *Education for Information*, *22*, 63–75.
- Sifferd, K. L., & Hirstein, W. (2013). On the criminal culpability of successful and unsuccessful psychopaths. *Neuroethics*, *6*(1), 129–140.
- Smith, S. S., Arnett, P. A., & Newman, J. P. (1992). Neuropsychological differentiation of psychopathic and nonpsychopathic criminal offenders. *Personality and Individual Differences*, *13*(11), 1233–1243.
- Smith, S. F., Lilienfeld, S. O., Coffey, K., & Dabbs, J. M. (2013). Are psychopaths and heroes twigs off the same branch? *Journal of Research in Personality*, *47*, 634–646.
- Snowden, R. J., & Gray, N. S. (2011). Impulsivity and psychopathy: Associations between the Barrett Impulsivity Scale and the Psychopathy Checklist revised. *Psychiatry research*, *187*(3), 414–417.

- Steinberg, L., Graham, S., O'Brien, L., Woolard, J., Cauffman, E., & Banich, M. (2009). Age differences in future orientation and delay discounting. *Child development, 80*(1), 28-44.
- Stevens, G. W., Deuling, J. K., & Armenakis, A. A. (2012). Successful psychopaths: Are they unethical decision-makers and why?. *Journal of Business Ethics, 105*(2), 139-149.
- Stroop, J. R. (1935). Studies of interference in serial verbal reactions. *Journal of Experimental Psychology, 18*(6), 643.
- Torrubia, R., Avila, C., Moltó, J., & Caseras, X. (2001). The Sensitivity to Punishment and Sensitivity to Reward Questionnaire (SPSRQ) as a measure of Gray's anxiety and impulsivity dimensions. *Personality and Individual Differences, 31*(6), 837-862.
- Ullrich, S., Farington, D. P., & Coid, J. W. (2008). Psychopathic personality traits and life success. *Personality and Individual Differences, 44*, 1162-1171.
- Unterrainer, J. M., Rahm, B., Leonhart, R., Ruff, C. C., & Halsband, U. (2003). The Tower of London: the impact of instructions, cueing, and learning on planning abilities. *Cognitive Brain Research, 17*(3), 675-683.
- Viding, E., & Kimonis, E. R. (under review). Callous-unemotional traits in children and youth. In C. Patrick (Ed.), *Handbook of Psychopathy* (2<sup>nd</sup> ed.). New York: The Guildford Press.
- Viding, E., Sebastian, C. L., Dadds, M. R., Lockwood, P. L., Cecil, C. A., De Brito, S. A., & McCrory, E. J. (2014). Amygdala response to preattentive masked fear in children with conduct problems: the role of callous-unemotional traits. *American Journal of Psychiatry*.
- Vincent, G. M., & Hart, S. D. (2002). Psychopathy in childhood and adolescence: Implications for the assessment and management of multi-problem youths. In R. R. Corrado, R. Roesch, S. D. Hart, & J. K. Gierowski (Ed.), *Multi-problem violent youth* (pp. 150–163). Washington, DC: IOS Press.
- Vitacco, M. J., Neumann, C. S., & Jackson, R. L. (2005). Testing a four-factor model of psychopathy and its association with ethnicity, gender, intelligence, and violence. *Journal of Consulting and Clinical Psychology, 73*(3), 466.
- Vitacco, M. J., Neumann, C. S., & Wodushek, T. (2008). Differential relationships between the dimensions of psychopathy and intelligence replication with adult jail inmates. *Criminal Justice and Behavior, 35*(1), 48–55.
- Vitale, J. E., Newman, J. P., Bates, J. E., Goodnight, J., Dodge, K. A., & Pettit, G. S. (2005). Deficient behavioral inhibition and anomalous selective attention in a community sample of adolescents with psychopathic traits and low-anxiety traits. *Journal of Abnormal Child Psychology, 33*(4), 461-470.
- Waller, R., Gardner, F., & Hyde, L. W. (2013). What are the associations between parenting, callous–unemotional traits, and antisocial behavior in youth? A systematic review of evidence. *Clinical Psychology Review, 33*(4), 593-608.
- Wechsler, D. (1999). *Wechsler abbreviated scale of intelligence*. Psychological Corporation.
- Whiteside, S. P., & Lynam, D. R. (2001). The five factor model and impulsivity: Using a structural model of personality to understand impulsivity. *Personality and individual differences, 30*(4), 669-689.
- Woodworth, M., & Porter, S. (2002). In cold blood: characteristics of criminal homicides as a function of psychopathy. *Journal of abnormal psychology, 111*(3), 436.
- Widom, C.S. (1977). A methodology for studying non-institutionalized psychopaths. *Journal of Counseling and Clinical Psychology, 45*, 674-683.
- Yang, Y., Raine, A., Lencz, T., Bihle, S., LaCasse, L., & Colletti, P. (2005). Volume reduction in prefrontal gray matter in unsuccessful criminal psychopaths. *Biological psychiatry, 57*(10), 1103-1108.

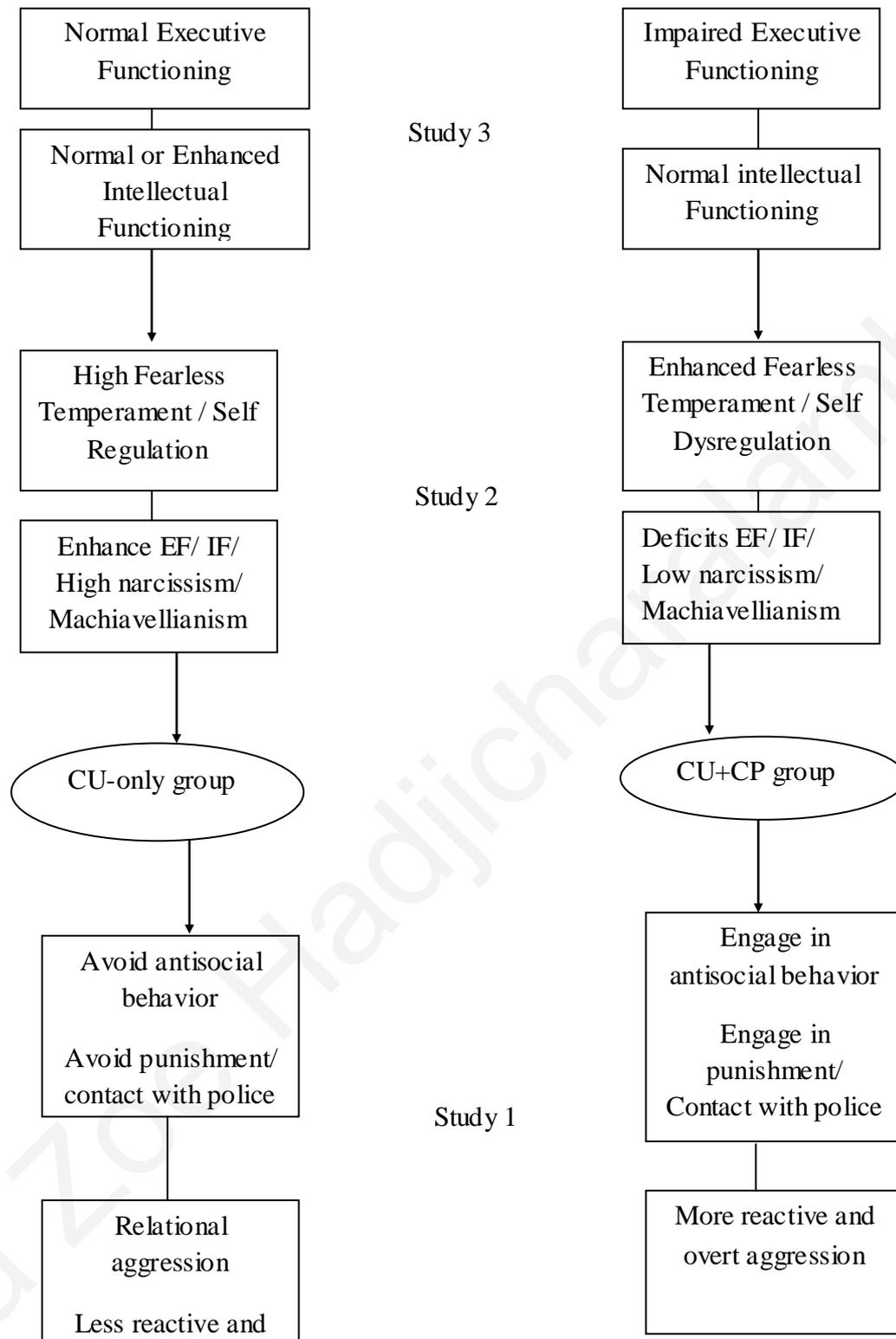


Figure 1. Proposed theoretical model on differentiating CU groups.

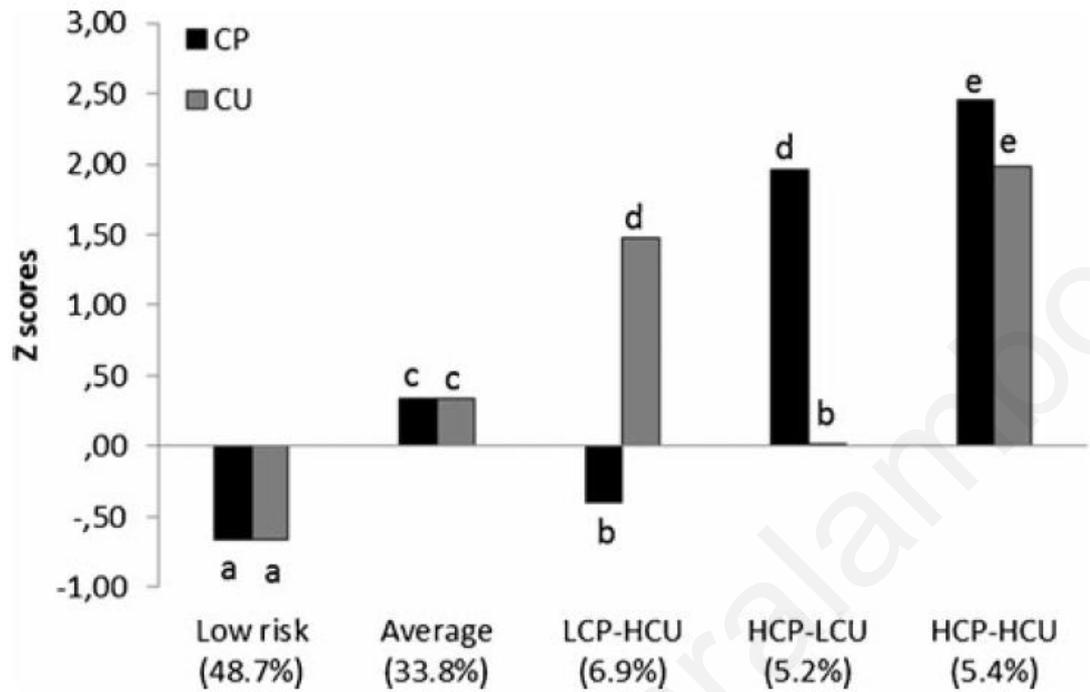


Figure 2. Identified groups from longitudinal study via Latent Profile Analysis model based on adolescents' scores on CP and CU traits (Fanti, 2013), from which the present study gathered participants in control, CU-only and CU+CP groups.

Table 1.

*Description of families invited and participated in the project at least in one study*

		<b>Participants</b>
<b>Families</b>	<b>Invited</b>	280
	<b>Participated</b>	149
<b>Gender</b>	<b>Male</b>	81 (54.4%)
	<b>Female</b>	68 (45.6%)
<b>Age</b>	<b>Valid</b>	135 (90.6%)
	<b>Missing</b>	14 (9.4%)
<b>Groups</b>	<b>Control</b>	71 (47.7%)
	<b>HCU</b>	37 (24.8%)
	<b>HCUCP</b>	41 (27.5%)

Table 2.

*Participated families in each study and overlapping participated families*

		Study 1		Study 2		Study 3	
		Interview	Youth-questionnaire	Mother-questionnaire	Computerized Tasks		
<b>Study 1</b>	<b>Interview</b>	<b>43</b>	36	31	39		
<b>Study 2</b>	<b>Youth-questionnaire</b>		<b>54</b>	46	49		
	<b>Mother-questionnaire</b>			<b>135</b>	76		
<b>Study 3</b>	<b>Computerized Tasks</b>				<b>84</b>		
<b>Study 2y&amp;3</b>		36					
<b>Study 2m&amp;3</b>		31					
<b>Study 2&amp;3</b>		30					

Table 3.

*Differences between CU groups on success within school environment.*

	Did something		Contact with authority		Kind of contact/Punishment			Overview of success			
	Yes	No	Yes	No	Less than minor	Minor	Major	Engage in violation	Engage in violation, no punishment	Engage in violation, minor punishment	Engage in violation, major punishment
<b>CU-only</b> (N=22)	18 (81.8%)	4 (18.2%)	12 (54.5%)	10 (45.5%)	5 (41.7%)	2 (16.7%)	5 (41.7%)	4 (18.2%)	11 (50%)	2 (9.1%)	5 (22.7%)
<b>CUCP</b> (N=19)	21 (100%)	0 (0%)	20 (95.2%)	1 (4.8%)	6 (30%)	2 (10%)	12 (60%)	0 (0%)	7 (33.3%)	2 (9.5%)	12 (57.1%)
<b>Total</b> (N=43)	39 (90.7%)	4 (9.3%)	32 (74.4%)	11 (25.6%)	11 (34.4%)	4 (12.5%)	17 (53.1%)	4 (9.3%)	18 (41.9%)	4 (9.3%)	17 (39.5%)
<b>Chi-square</b>	$\chi^2 = 4.21, p < .05$ Fisher's $p = .059$		$\chi^2 = 9.35, p < .01$ Fisher's $p = .002$		$\chi^2 = 1.038, p = .595$			$\chi^2 = 7.752, p = .051$ Linear by linear association, $\chi^2 = 7.025, p = .008$			

Table 4.

*Differences between CU groups on success within society environment.*

	Did something		Contact with authority		Kind of contact/ Punishment			Overview of success			
	Yes	No	Yes	No	Less than minor	Minor	Major	Engage in violation	Engage in violation, no punishment	Engage in violation, minor punishment	Engage in violation, major punishment
<b>CU-only</b> (N=22)	5 (22.7%)	17 (77.3%)	4 (18.2%)	18 (81.8%)	2 (50%)	2 (50%)	0 (0%)	17 (77.3%)	3 (13.6%)	2 (9.1%)	0 (0%)
<b>CUCP</b> (N=19)	13 (61.9%)	8 (38.1%)	10 (47.6%)	11 (52.4%)	2 (28.6%)	2 (28.6%)	3 (42.9%)	11 (52.4%)	5 (23.8%)	2 (9.5%)	3 (14.3%)
<b>Total</b> (N=43)	18 (41.9%)	25 (58.1%)	14 (32.6%)	29 (67.4%)	4 (36.4%)	4 (36.4%)	3 (27.3%)	28 (65.1%)	8 (18.6%)	4 (9.3%)	3 (7%)
<b>Chi-square</b>	$\chi^2 = 6.78, p < .01$		$\chi^2 = 4.24, p < .05$ Fisher's $p = .04$		$\chi^2 = 2.36, p = .308$			$\chi^2 = 4.76, p = .190$ Linear by linear association, $\chi^2 = 3.60, p = .058$			

Table 5.

*Main effects on types of aggression based on youth's reports*

	<b>Control (N=13)</b>	<b>CU-only (N=22)</b>	<b>CU+CP (N=19)</b>	<b>F-value</b>	<b>P-value</b>	<b><math>\eta^2</math></b>	<b>df</b>
<b>Proactive Overt Aggression</b>	.308 (.929) <sup>a</sup>	1.864 (.714) <sup>a</sup>	3.211 (.769) <sup>a</sup>	2.913	.063	.103	2, 51
<b>Proactive Relational Aggression</b>	.308 (.988) <sup>a</sup>	2.182 (.760) <sup>a</sup>	2.737 (.818) <sup>a</sup>	1.889	.162	.069	2,51
<b>Proactive aggression</b>	.615 (1.867) <sup>a</sup>	4.045 (1.435) <sup>a</sup>	5.947 (1.544) <sup>a</sup>	2.431	.098	.087	2, 51
<b>Reactive Overt Aggression</b>	1 (1.332) <sup>a</sup>	3.591 (1.024) <sup>a</sup>	7.421 (1.102) <sup>b</sup>	7.323	.002	.223	2, 51
<b>Reactive Relational aggressive</b>	.923 (1.074) <sup>a</sup>	2.682 (.826) <sup>a</sup>	3.789 (.888) <sup>a</sup>	2.116	.131	.077	2, 51
<b>Reactive Aggression</b>	1.923 (2.190) <sup>a</sup>	6.273 (1.684) <sup>ab</sup>	11.211 (1.812) <sup>b</sup>	5.480	.007	.177	2, 51
<b>Overt Aggression</b>	1.308 (2.141) <sup>a</sup>	5.455 (1.646) <sup>ab</sup>	10.632 (1.771) <sup>b</sup>	5.842	.005	.186	2, 51
<b>Relational Aggression</b>	1.231 (1.956) <sup>a</sup>	4.864 (1.504) <sup>a</sup>	6.526 (1.618) <sup>a</sup>	2.206	.121	.080	2, 51

Estimated marginal means (SE), Different superscripts (a, b, c) denote significant differences between groups in post hoc multiple comparisons using the Bonferroni procedure.

Table 6.

*Main effects based on youth's self-report*

		<b>Control (N=13)</b>	<b>CU-only (N=22)</b>	<b>CU+CP (N=19)</b>	<b>F-value</b>	<b>P-value</b>	<b><math>\eta^2</math></b>	<b>df</b>
<b>Temperamental Char</b>	Behavior Inhibition	13.077 (1.076) <sup>a</sup>	11.333 (.847) <sup>b</sup>	12.211 (.890) <sup>ab</sup>	.829	.443	.032	2, 50
	Behavior Activation	24.615 (1.959) <sup>ab</sup>	22.045 (1.506) <sup>b</sup>	27.211 (1.620) <sup>a</sup>	2.730	.075	.097	2, 51
	Sensitivity to Punishment	11 (1.147) <sup>a</sup>	10.667 (.903) <sup>a</sup>	11.579 (.949) <sup>a</sup>	.246	.783	.010	2, 50
	Sensitivity to Reward	8.769 (1.127) <sup>c</sup>	10.429 (.887) <sup>b</sup>	12.842 (.932) <sup>a</sup>	4.096	.023	.141	2, 50
	Fear	2.846 (.219) <sup>a</sup>	2.542 (.177) <sup>a</sup>	2.561 (.181) <sup>a</sup>	.683	.510	.027	2, 49
	Shyness	3.989 (.227) <sup>a</sup>	3.736 (.183) <sup>ab</sup>	3.489 (.188) <sup>b</sup>	1.463	.241	.056	2, 49
<b>Regulatory dyscontrol</b>	Impulsivity	2.923 (.596) <sup>c</sup>	4.773 (.458) <sup>b</sup>	7.421 (.493) <sup>a</sup>	17.867	.000	.412	2,51
	Attention	4.956 (.145) <sup>a</sup>	4.500 (.117) <sup>b</sup>	4.135 (.120) <sup>c</sup>	9.526	.000	.280	2, 49
	Inhibitory Control	5.154 (.116) <sup>a</sup>	4.627 (.094) <sup>b</sup>	4.368 (.096) <sup>c</sup>	13.628	.000	.357	2, 49
	Activate Control	4.798 (.107) <sup>a</sup>	4.144 (.087) <sup>b</sup>	4 (.089) <sup>b</sup>	17.753	.000	.420	2, 49
<b>Interpersonal Char</b>	Narcissism	2.231 (.642) <sup>c</sup>	3.773 (.493) <sup>b</sup>	6.474 (.531) <sup>a</sup>	14.147	.000	.357	2,51
	Lack of Faith	16.692 (1.034) <sup>a</sup>	16.045 (.795) <sup>a</sup>	17.421 (.855) <sup>a</sup>	.695	.504	.027	2, 51
	Manipulation	10.462 (1.002) <sup>b</sup>	12.591 (.770) <sup>a</sup>	12.579 (.829) <sup>a</sup>	1.707	.192	.063	2, 51
	Dishonesty	8 (.767) <sup>b</sup>	11.545 (.589) <sup>a</sup>	10.632 (.634) <sup>a</sup>	6.849	.002	.212	2, 51
	Distrust	6.231 (.736) <sup>b</sup>	7.500 (.566) <sup>a</sup>	7.263 (.609) <sup>a</sup>	.982	.382	.037	2, 51

Estimated marginal means (SE), Different superscripts (a, b, c) denote significant differences between groups in post hoc multiple comparisons using the Bonferroni procedure.

Table 7.

*Main effects between identified groups based on mothers' report*

		<b>Control (N=69)</b>	<b>CU-only (N=33)</b>	<b>CU+CP (N=37)</b>	<b>F-value</b>	<b>P-value</b>	<b><math>\eta^2</math></b>	<b>df</b>
<b>Temperamental Char</b>	Sensitivity to Punishment	1.464 (.078) <sup>b</sup>	1.682 (.112) <sup>ab</sup>	1.820 (.107) <sup>a</sup>	3.871	.023	.053	2, 140
	Sensitivity to Reward	1.743 (.085) <sup>b</sup>	1.866 (.122) <sup>b</sup>	2.329 (.117) <sup>a</sup>	8.410	.000	.109	2, 140
	Surgency	2.675 (.075) <sup>a</sup>	2.286 (.125) <sup>b</sup>	2.580 (.122) <sup>c</sup>	3.596	.030	.058	2, 120
	Fear	1.495 (.081) <sup>a</sup>	1.581 (.114) <sup>a</sup>	1.644 (.109) <sup>a</sup>	.632	.533	.010	2, 134
	Shyness	1.330 (.101) <sup>b</sup>	1.762 (.146) <sup>a</sup>	1.578 (.138) <sup>ab</sup>	3.171	.045	.045	2, 139
<b>Regulatory dyscontrol</b>	Impulsivity	2.351 (.312) <sup>c</sup>	4.750 (.480) <sup>b</sup>	7.115 (.462) <sup>a</sup>	37.965	.000	.422	2, 107
	Attention	2.957 (.078) <sup>a</sup>	2.479 (.113) <sup>b</sup>	2.173 (.107) <sup>c</sup>	18.758	.000	.216	2, 139
	Inhibitory Control	2.983 (.080) <sup>a</sup>	2.697 (.116) <sup>b</sup>	2.265 (.109) <sup>c</sup>	14.138	.000	.172	2, 139
	Activate Control	2.700 (.075) <sup>a</sup>	2.259 (.109) <sup>b</sup>	1.757 (.103) <sup>c</sup>	27.680	.000	.289	2, 139
<b>Interpersonal Char</b>	Narcissism	1.684 (.371) <sup>c</sup>	4.391 (.584) <sup>b</sup>	6.923 (.549) <sup>a</sup>	32.554	.000	.387	2, 106

Estimated marginal means (SE), Different superscripts (a, b, c) denote significant differences between groups in post hoc multiple comparisons using the Bonferroni procedure.

Table 8.

Main effects between identified groups based on Executive Function computerized tasks

	Control (N=40)	CU-only (N=18)	CU+ CP (N=21)	F-value	P-value	$\eta^2$	df
<b>Stroop.RT.hard</b>	15.931 (11.282) <sup>b</sup>	23.614 (17.957) <sup>b</sup>	55.219 (16.867) <sup>a</sup>	1.898	.158	.054	2,70
<b>Stroop.RT.easy</b>	23.838 (10.621) <sup>a</sup>	26.134 (17.126) <sup>a</sup>	19.650 (16.087) <sup>a</sup>	.041	.960	.001	2, 71
<b>TOL.AT.1stmove.3moves</b>	4267.433 (234.739) <sup>a</sup>	3362.736 (303.047) <sup>b</sup>	3368.362 (287.496) <sup>b</sup>	4.123	.021	.113	2, 68
<b>TOL.AT.1stmove.4moves</b>	3591.083 (211.005) <sup>a</sup>	3785.789 (265.141) <sup>a</sup>	3085.487 (258.427) <sup>b</sup>	1.960	.149	.056	2, 69
<b>TOL.AT.1stmove.5moves</b>	3763.608 (251.587) <sup>a</sup>	3304.118 (316.134) <sup>ab</sup>	3156.50 (308.130) <sup>b</sup>	1.335	.270	.039	2, 69
<b>TOL.AT.1stmove.6moves</b>	4553.142 (328.760) <sup>a</sup>	4284.711 (413.108) <sup>a</sup>	3909.597 (424.428) <sup>a</sup>	.720	.491	.022	2, 67
<b>TOL.AT.1stmove.7moves</b>	4276.069 (448.224) <sup>a</sup>	4122.105 (553.755) <sup>a</sup>	4352.268 (539.733) <sup>a</sup>	.046	.955	.001	2, 68
<b>TOL.AT.1st.easy</b>	3929.258 (187.231) <sup>a</sup>	3456.479 (241.714) <sup>b</sup>	3226.925 (229.310) <sup>b</sup>	3.046	.054	.086	2, 68
<b>TOL.AT.1st.hard</b>	4570.450 (417.768) <sup>a</sup>	4203.408 (524.951) <sup>a</sup>	4658.469 (511.659) <sup>a</sup>	.222	.802	.007	2, 69
<b>IGT.Badplay.block6</b>	.079 (.401) <sup>a</sup>	.278 (.583) <sup>a</sup>	.600 (.553) <sup>a</sup>	.291	.749	.008	2,76
<b>IGT.Goodplay.block6</b>	1.026 (.371) <sup>ab</sup>	.882 (.562) <sup>b</sup>	1.850 (.518) <sup>a</sup>	1.058	.352	.028	2,76

Estimated marginal means (SE), Different superscripts (a, b, c) denote significant differences between groups in post hoc multiple comparisons using the Bonferroni procedure. Stroop.RT.hard/easy: Respond time measuring resistance to unequal/ equal incongruent and neutral stimuli, TOL.AT1 stmove3moves-7moves: Average time until the first move for problems that can be solved in a minimum of 3-7 moves, IGT.bad/goodplay.block6: Percentage of preferences in playing bad/good cards the last block, measuring punishment/reward sensitivity.

Table 9.

*Main effects between identified groups based on Intellectual Function computerized tasks*

	<b>Control (N=42)</b>	<b>CU-only (N=20)</b>	<b>CU+ CP (N=21)</b>	<b>F-value</b>	<b>P-value</b>	<b><math>\eta^2</math></b>	<b>df</b>
<b>Nonverbal abilities</b>	49.795 (1.225) <sup>a</sup>	49.167 (1.803) <sup>a</sup>	45.476 (1.669) <sup>b</sup>	2.268	.111	.057	2,78
<b>Verbal abilities</b>	62.205 (3.116) <sup>a</sup>	66.125 (4.865) <sup>a</sup>	63.579 (4.464) <sup>a</sup>	.231	.794	.006	2,74

Estimated marginal means (SE), Different superscripts (a, b, c) denote significant differences between groups in post hoc multiple comparisons using the Bonferroni procedure.

## Appendices

### Appendix A

#### The law on how society punishes juvenile offenders in Cyprus

ΚΥΠΡΙΑΚΗ ΔΗΜΟΚΡΑΤΙΑ

#### Ειδήσεις

Ως Πολιτεία, αλλά και ως κοινωνία, έχουμε χρέος προς τη νέα γενιά να της παραδώσουμε ως παρακαταθήκη ένα κράτος δικαίου και να τους διασφαλίσουμε το δικαίωμα μιας ελεύθερης, υγιούς ζωής, μακριά από τη βία και το έγκλημα.

12/05/2014

Παρέμβαση Υπουργού στη Συνεδρία της Επιτροπής Κοινωνικών Θεμάτων, Υγείας και Αειφόρου Ανάπτυξης της Κοινοβουλευτικής Συνέλευσης του Συμβουλίου της Ευρώπης με θέμα: *Child friendly juvenile justice: from rhetoric to reality*. Συνεδριακό Κέντρο «Φιλοξενία», 12 Μαΐου 2014

Είναι γενικώς αποδεκτό ότι μερικά πρόσωπα χρειάζονται ειδικές εγγυήσεις, στο πλαίσιο της ποινικής διαδικασίας, για να διασφαλιστεί η κατανόηση και η άσκηση των δικαιωμάτων τους. Αν τα πρόσωπα αυτά δεν κατανοούν τη διαδικασία ή τις συνέπειες ενεργειών, όπως η ομολογία, είτε διότι δεν έχει εντοπιστεί ο ευάλωτος χαρακτήρας τους είτε διότι δεν έχουν θεσπισθεί ειδικές εγγυήσεις, υπονομεύεται η αρχή της ισότιμης μεταχείρισης, γεγονός που μειώνει τις πιθανότητες τους για διεξαγωγή δίκαιης δίκης και απειλεί την ακεραιότητα της δικαστικής διαδικασίας.

Τα παιδιά θεωρούνται εξ ορισμού ευάλωτα, λόγω της νεαρής τους ηλικίας, της μη ολοκληρωμένης σωματικής και ψυχολογικής ανάπτυξης και της συναισθηματικής τους ανωριμότητας. Τα παιδιά αντιμετωπίζουν μεγαλύτερο κίνδυνο κακής μεταχείρισης και προβλημάτων υγείας απ' ό,τι άλλοι ύποπτοι ή κατηγορούμενοι· ενδέχεται να μην μπορούν να εκφράσουν δεόντως τις δυσκολίες τους ή τα προβλήματα υγείας. Επομένως, θεωρούμε ότι τα παιδιά χρειάζονται ειδικές εγγυήσεις και προστασία στην ποινική διαδικασία.

Αρκετές διατάξεις, συνταγματικές και νομοθετικές στην Κύπρο, διασφαλίζουν τον σεβασμό των ανθρωπίνων δικαιωμάτων και των θεμελιωδών ελευθεριών, όπως προβλέπεται σε διεθνή εργαλεία, κάθε ατόμου στη Δημοκρατία που κατηγορείται ότι παραβίασε το νόμο, συμπεριλαμβανομένων διατάξεων που ισχύουν ειδικά για ανήλικους παραβάτες.

#### (α) Η απονομή της δικαιοσύνης αναφορικά με τους ανήλικους

1. Στην Κύπρο εδώ και χρόνια έχει οριστεί ως όριο ποινικής ευθύνης, η ηλικία των 14 χρόνων. Σύμφωνα με το άρθρο 14 του Ποινικού Κώδικα, Κεφ. 154: «Όποιος έχει ηλικία κάτω των δεκατεσσάρων χρόνων δεν είναι ποινικά υπεύθυνος για οποιαδήποτε πράξη ή παράλειψη». Η τάση που παρατηρείται σήμερα σε κάποιες χώρες για μείωση του ορίου ηλικίας, λόγω της έξαρσης της νεανικής παραβατικότητας ένεκα και της οικονομικής κρίσης, δεν μας βρίσκει σύμφωνους.
2. Πρόσθετα, το τεκμήριο αθωότητας κατηγορουμένου προσώπου και το δόγμα του "nulum crimen nulla poena sine lege", «κανένα έγκλημα - καμία ποινή χωρίς νόμο» κατοχυρώνεται με σαφήνεια στο Άρθρο 12 του Κυπριακού Συντάγματος, καθώς επίσης και τα ελάχιστα δικαιώματα που μπορεί να έχει ένας κατηγορούμενος.
3. Αρκετές διατάξεις που περιέχονται στον νόμο για τους ανήλικους παραβάτες, το Κεφ. 157, αποσκοπούν στην αντιμετώπιση των ανήλικων παραβατών με τρόπο που να λαμβάνει υπόψη την ηλικία τους και είναι σύμφωνες με την προώθηση των βέλτιστων συμφερόντων τους.

Συγκεκριμένα:

- Τέτοιες υποθέσεις εκδικάζονται από δικαστήριο ανήλικων που ο νόμος ορίζει να συνεδριάζει σε διαφορετικό κτήριο ή αίθουσα από εκείνη στην οποία διεξάγονται οι συνήθεις συνεδριάσεις του Επαρχιακού Δικαστηρίου, ή σε διαφορετικές ημέρες ή ώρες από αυτές τις συνεδριάσεις.
- Είναι καθήκον του Δικαστηρίου να εξηγήσει σε απλή γλώσσα στο παιδί ή το νεαρό άτομο που οδηγήθηκε ενώπιον του την ουσία της κατηγορίας που προσάπτεται.
- Η προστασία προσωπικών δεδομένων τηρείται πλήρως σε όλα τα στάδια της διαδικασίας. Σε Δικαστήριο ανήλικων κανένα πρόσωπο δεν επιτρέπεται να παραστεί, εκτός από τα μέλη και τους υπαλλήλους του Δικαστηρίου και τα μέρη που εμπλέκονται στην υπόθεση, τους δικηγόρους και άλλα πρόσωπα στα οποία αφορά άμεσα η υπόθεση. Το Δικαστήριο μπορεί, κατά την κρίση του, να ζητήσει την παρουσία των γονέων ή του κηδεμόνα.
- Το Δικαστήριο μπορεί να λάβει πληροφορίες ως προς την εν γένει συμπεριφορά του παιδιού ή του νεαρού ατόμου, το οικογενειακό περιβάλλον, την σχολική επίδοση και το ιατρικό ιστορικό.

Πολύ σημαντικό σημείο είναι ότι με ρητή διάταξη στον εν λόγω Νόμο, κανένας νέος δεν πρέπει να καταδικαστεί σε φυλάκιση, εάν μπορεί να αντιμετωπιστεί κατάλληλα με οποιοδήποτε άλλο τρόπο.

Στο σημείο αυτό αξίζει νομίζω να επισημανθεί ότι ανεξάρτητα από την πρόθεση μας για εκσυγχρονισμό του πλαισίου ποινικής μεταχείρισης ανηλίκων, με την υιοθέτηση σύγχρονων αντιλήψεων μεταχείρισης των νεαρών παραβατών και την παιδοκεντρική προσέγγιση των δικαστικών διαδικασιών και μέτρων ποινής, η υφιστάμενη νομοθεσία παρέχει με αποδεκτή επάρκεια ικανοποιητικές εγγυήσεις για την ειδική προστασία που απαιτείται σε ανηλίκους.

#### (β) Στέρηση της ελευθερίας

1. Σύμφωνα με το Άρθρο 11 του Συντάγματος:

1.1. Κανένας δεν συλλαμβάνεται παρά μόνο κατόπιν αιτιολογημένου δικαστικού εντάλματος, με εξαίρεση το αυτόφωρο αδίκημα που τιμωρείται με φυλάκιση.

1.2 Σύμφωνα με τις παραγράφους (4), (5) και (6): Κάθε συλλημβανόμενος, κατά την σύλληψη του, πληροφορείται σε κατανοητή γλώσσα τους λόγους σύλληψης του και δικαιούται να ζητήσει τις υπηρεσίες δικηγόρου της εκλογής του.

Το συντομότερο μετά την σύλληψη του και όχι αργότερο των είκοσι τεσσάρων ωρών, προσάγεται ενώπιον του δικαστηρίου, εφόσον δεν αφαιρεθεί ελεύθερος, και ο δικαστής προχωρεί αμέσως στη διερεύνηση των λόγων της σύλληψης του σε κατανοητή γλώσσα για τον συλληφθέντα, το αργότερο εντός τριών ημερών. Απολύει τον συλληφθέντα υπό τους όρους που το ίδιο κρίνει κατάλληλους ή σε περίπτωση κατά την οποία δεν έχουν συμπληρωθεί οι ανακρίσεις για το αδίκημα που συνελήφθη δύναται να διατάξει την κράτηση του για περίοδο που δεν υπερβαίνει τις οκτώ μέρες.

1.3 Ο συνολικός χρόνος της κράτησης δεν υπερβαίνει τους τρεις μήνες από την ημερομηνία σύλληψης.

2. Η κράτηση ενός προσώπου, είτε κατά τη διάρκεια της έρευνας για ποινικό αδίκημα ή η προφυλάκιση του μετά τη διαμόρφωση των κατηγοριών και εν αναμονή της δίκης, εκλαμβάνεται από τα δικαστήρια της Κύπρου ως εξαιρετικό μέτρο, που παρεκκλίνει από το τεκμήριο αθωότητας και συνεπώς πρέπει να είναι αυστηρά δικαιολογημένη, πολύ περισσότερο στην περίπτωση των νεαρών παραβατών και των ανηλίκων. Τα δικαστήρια έχουν διακριτική ευχέρεια σ' αυτό το θέμα και όταν αποφαίνονται για την αίτηση προφυλάκισης, πρέπει να επιφέρουν την ισορροπία ανάμεσα στην ανάγκη διατήρησης της ατομικής ελευθερίας, και την ανάγκη υπαγωγής του υπαίτιου στη δικαιοσύνη.

3. Κάθε κατά τα ανωτέρω απόφαση του δικαστηρίου υπόκειται σε έφεση.

4. Όταν η Αστυνομία ασκείται με περιπτώσεις στις οποίες υπάρχουν υπόνοιες ότι ανήλικοι έχουν διαπράξει αδίκημα, πρέπει να βεβαιώνεται ότι οι γονείς ή κηδεμόνες καθώς και ο Αστυνομικός Διευθυντής της επαρχίας ενημερώνονται εγκαίρως. Σε περίπτωση που ο ύποπος είναι μαθητής, η σύλληψη και η ανάκριση στο σχολείο αποφεύγεται και μπορεί να πραγματοποιηθεί μόνο όταν αυτό είναι απολύτως αναγκαίο και μόνο με τη συγκατάθεση και υπό την παρουσία του Διευθυντή.

4.1 Δυνάμει του άρθρου 7 του περί Ανηλίκων Παραβατών Νόμου, το δικαστήριο όταν εξαιρετικές περιπτώσεις προφυλακίζει ή παραπέμπει σε δίκη ένα ανήλικο που δεν ελευθερώνεται με εγγύηση, τον παραπέμπει για κράτηση σε αστυνομικό σταθμό και όχι στις φυλακές. Η Αστυνομία έχει την υποχρέωση να προβεί σε ρυθμίσεις για την αποφυγή της επικοινωνίας του με κατάδικο ενήλικα.

#### Εξελίξεις

Το 2005 ψηφίστηκε νομοθεσία που επεκτείνει τις συνταγματικές διατάξεις, όπως τις έχω προαναφέρει, διασφαλίζοντας τα δικαιώματα των προσώπων που συλλαμβάνονται και τελούν υπό κράτηση. Πρόκειται για τον περί των Δικαιωμάτων Προσώπων που Συλλαμβάνονται και Τελούν υπό Κράτηση Νόμο του 2005 (Ν.163(Ι)/2005).

Εκτός από τον καθορισμό ενιαίων κανόνων για τις συνθήκες κράτησης, την ευμερία και την αξιοπρεπή μεταχείριση των συλληφθέντων και των κρατουμένων, αυτός ο νόμος:

- προβλέπει το δικαίωμα κάθε ατόμου που συλλαμβάνεται να έχει άμεση επικοινωνία με δικηγόρο της επιλογής του, και με την οικογένεια / συγγενείς / άλλο πρόσωπο που θα υποδείξει, και σε περίπτωση αλλοδαπού προσώπου, με την Πρεσβεία του ή το Προξενείο, ή σε περίπτωση που δεν υπάρχει διπλωματική αποστολή της χώρας στη Δημοκρατία, με το Γραφείο του Επιτρόπου Διοικήσεως, καθώς επίσης και το δικαίωμα σε ιατρική εξέταση και θεραπεία.
- καθορίζει τις αντίστοιχες υποχρεώσεις των μελών της Αστυνομίας, να ενημερώνουν τον συλληφθέντα για τα δικαιώματά του και να διευκολύνουν την αποτελεσματική άσκηση των δικαιωμάτων αυτών πριν από την έναρξη της ανάκρισης, και τιμωρεί την παραβίαση οποιασδήποτε από τις υποχρεώσεις αυτές.
- ρυθμίζει το δικαίωμα επισκέψεων από τους συγγενείς, τις συναντήσεις με τον δικηγόρο και άλλα θέματα κατά τη διάρκεια της κράτησης.

Όσον αφορά, ειδικότερα τους ανήλικους κάτω των 18 ετών, ο νόμος προβλέπει επιπλέον:

- την υποχρέωση της Αστυνομίας να ενημερώνει αμέσως τους γονείς ή κηδεμόνες για τη σύλληψη ή κράτηση και τους λόγους για αυτή (ανεξάρτητα από την άσκηση του δικαιώματος επικοινωνίας του ανήλικου μαζί τους) και εάν παραστεί ανάγκη, την ενημέρωση και των Υπηρεσιών Κοινωνικής Ευημερίας της Δημοκρατίας-
- ότι η ανάκριση διεξάγεται στην παρουσία του δικηγόρου του ανήλικου-
- ότι οι γονείς ή οι κηδεμόνες έχουν το δικαίωμα να είναι παρόντες κατά τη διάρκεια της επικοινωνίας και κατά τις συναντήσεις του ανήλικου με τον δικηγόρο του, ή κατά τη διάρκεια της ιατρικής εξέτασης ή θεραπείας-
- ότι οι ανήλικοι κρατούνται χωριστά.

#### (γ) Ποινική μεταχείριση ανήλικων παραβατών

1. Σύμφωνα με το άρθρο 12 του περί Ανήλικων Παραβατών Νόμου, Κεφ. 157, όπου το Δικαστήριο ενώπιον του οποίου δικάζεται ένας ανήλικος για οποιοδήποτε αδίκημα, είναι ικανοποιημένο από την ενοχή του, μπορεί να χειριστεί την υπόθεση με οποιονδήποτε από τους παρακάτω τρόπους:

- απορρίπτοντας την κατηγορία-
- υποβάλλοντας τον παραβάτη υπό την εποπτεία κηδεμονικού λειτουργού (το καθήκον έχει ανατεθεί στις Υπηρεσίες Κοινωνικής Ευημερίας του Υπουργείου Εργασίας και Κοινωνικών Ασφαλίσεων)-
- υποβάλλοντας τον παραβάτη υπό την φροντίδα ενός συγγενή ή άλλου κατάλληλου προσώπου-
- διατάζοντας την καταβολή προστίμου, ζημιών ή εξόδων για τα οποία υπάρχει ευθύνη του παραβάτη, συνήθως από τους γονείς ή τον κηδεμόνα-
- επιβάλλοντας ποινή φυλάκισης. Με ρητή διάταξη του νόμου, ο ανήλικος μόνο τότε μπορεί να καταδικαστεί σε φυλάκιση, εάν δεν μπορεί να αντιμετωπιστεί κατάλληλα με οποιονδήποτε από τους τρόπους που αναφέρονται ανωτέρω.

1.1 Παρά το γεγονός ότι δεν υπάρχει νομικός ορισμός των νεαρών ανήλικων παραβατών, άτομα ηλικίας κάτω των 21 ετών πάντα αντιμετωπίζονται ως νεαροί παραβάτες και μερικές φορές αυτή η κατηγορία έχει επεκταθεί για να συμπεριλάβει τα άτομα μέχρι 25 ετών. Ένα παράδειγμα στη νομοθεσία είναι ο περί Ναρκωτικών Φαρμάκων και Ψυχοτρόπων Ουσιών (Τροποποιητικός) Νόμος του 1992, ο οποίος προβλέπει την αύξηση των ποινών για αδικήματα ναρκωτικών μέχρι ισόβια κάθειρξη, αλλά διαφοροποιεί την μεταχείριση των ατόμων ηλικίας κάτω των 25 ετών, που καθίστανται παραβάτες για πρώτη φορά και το αδίκημα συνδέεται με την προσωπική χρήση ναρκωτικών. Τέτοιες υποθέσεις εκδικάζονται συνοπτικά και οι ποινές δεν υπερβαίνουν την φυλάκιση για δύο χρόνια.

1.2. Στις περιπτώσεις των εγκλημάτων που εμπλέκονται νεαρά άτομα μέχρι 21 ετών, αποτελεί πάγια πρακτική να λαμβάνεται έκθεση κοινωνικής έρευνας πριν την επιβολή ποινής, προκειμένου να εξασφαλισθούν πληροφορίες από αξιόπιστη πηγή σχετικά με τον χαρακτήρα, την ανατροφή και το περιβάλλον του δράστη, ώστε να αξιολογηθούν με τεκμηριωμένο τρόπο οι προοπτικές αποκατάστασης του κατηγορουμένου.

1.3. Το πιο συχνά χρησιμοποιούμενο μέτρο που επιβάλλεται σε ανήλικους παραβάτες είναι το διάταγμα κηδεμονίας που τοποθετεί τον κατάδικο υπό την επίβλεψη του κηδεμονικού λειτουργού του Γραφείου Ευημερίας.

#### (δ) Φυλάκιση ανηλίκων παραβατών

1. Από τα διεθνή πρότυπα απορρέει ότι τα παιδιά που έρχονται αντιμέτωπα με το σύστημα ποινικής δικαιοσύνης θα πρέπει να τυγχάνουν εναλλακτικών προς τη φυλάκιση μέτρων και μέτρων εκπαίδευσης και θα πρέπει να στερούνται της ελευθερίας τους μόνο σε εξαιρετικές περιστάσεις. Τα παιδιά βρίσκονται σε ιδιαίτερα ευάλωτη θέση όταν στερούνται της ελευθερίας τους λόγω των εγγενών κινδύνων για τη σωματική, την ψυχική και την κοινωνική τους ανάπτυξη. Για την αποφυγή της κακής μεταχείρισης και της κακοποίησης σε περίπτωση στέρησης της ελευθερίας λαμβάνονται μέτρα προστασίας, μεταξύ των οποίων είναι και ότι:

- Οι νεαροί παραβάτες που καταδικάζονται σε ποινή φυλάκισης κρατούνται χωριστά και δεν συνδέονται με ενήλικες κρατούμενους.
- Οι νέοι που βρίσκονται υπό κράτηση ενθαρρύνονται να βελτιώσουν το επίπεδο της εκπαίδευσής τους και της επαγγελματικής εκπαίδευσης, παρακολουθώντας μαθήματα μέσα ή έξω από τις φυλακές ή μαθήματα δι' αλληλογραφίας.
- Τους δίνεται η δυνατότητα να εργαστούν όσο το δυνατόν περισσότερο σε ένα είδος εργασίας που επιθυμούν να εκτελούν, ώστε να αυξηθεί η κωνότητά τους να κερδίζουν το προς το ζην τους μετά την απελευθέρωση.

2. Ψυχολογικές και ψυχιατρικές υπηρεσίες και υποστήριξη προσφέρονται σε όλους τους νέους φυλακισμένους που τις έχουν ανάγκη, με προσωπικές συναντήσεις, ομαδικές συζητήσεις (συνεδριάσεις της ομάδας) και συναντήσεις με την παρουσία της οικογένειας του κρατούμενου.

3. Υπηρεσίες πρόνοιας και στήριξης παρέχονται σε όλους τους νεαρούς κρατούμενους με τακτικές επισκέψεις / επαφές με τις οικογένειές τους και με άδεια που λαμβάνουν εκτός φυλακών, προκειμένου να διευκολυνθεί η κοινωνική ένταξη με τις οικογένειές τους και την κοινωνία.

4. Όλοι οι νέοι παραβάτες έχουν την ευκαιρία να συμμετέχουν σε ψυχαγωγικές δραστηριότητες και προγράμματα όπως ο αθλητισμός, θέατρο, μουσική κλπ, τα οποία τους κρατούν ψυχικά και σωματικά δραστήριους.

5. Δυνάμει του άρθρου 53 του Συντάγματος, ο Πρόεδρος της Δημοκρατίας μπορεί, με τη σύμφωνη γνώμη του Γενικού Εισαγγελέα της Δημοκρατίας να μειώσει, αναστείλει ή μετατρέψει οιαδήποτε ποινή που επιβλήθηκε από δικαστήριο στη Δημοκρατία.

6. Οι περί Φυλακών Κανονισμοί προβλέπουν επίσης τη διαγραφή των ποινών λόγω καλής διαγωγής και εργατικότητας.

7. Στο σημείο αυτό αξίζει να γίνει αναφορά στο θεσμό της περιοδικής φυλάκισης κατά τα σαββατοκύριακα. Η ποινή αυτή επιβάλλεται όπου η φυλάκιση είναι μεν δικαιολογημένη, αλλά ενόψει όλων των περιστάσεων που αφορούν τον δράστη είναι επιθυμητό να μην αποκοπεί από την οικογένειά του, τον κοινωνικό περίγυρο, την εργασία ή τις σπουδές του. Η ποινή αυτή έχει συνδεθεί με τα αδικήματα βίας στα γήπεδα.

#### (ε) Αποκατάσταση των καταδικασθέντων

Το 2004, ο νόμος για την αποκατάσταση των καταδικασθέντων τροποποιήθηκε, με κυριότερες τις τροποποιήσεις εκείνες που ρυθμίζουν με μεγαλύτερη επείγεια τις προϋποθέσεις υπό τις οποίες οι προηγούμενες καταδικές διαγράφονται στην περίπτωση νεαρών ατόμων μέχρι την ηλικία των 21 ετών. Σε ορισμένες περιπτώσεις η αποκατάσταση καταδικής νεαρών ατόμων είναι άμεση.

#### (στ) Αποκαταστατική δικαιοσύνη σε ανήλικους παραβάτες

1. Όπως αναφέρθηκε ανωτέρω, το πιο συχνά χρησιμοποιούμενο μέτρο για τους ανήλικους παραβάτες είναι το διάταγμα κηδεμονίας, ως εναλλακτική λύση για τη φυλάκιση, σύμφωνα με το οποίο ο κατάδικος τοποθετείται υπό την επίβλεψη του κηδεμονικού Λειτουργού του Γραφείου Ευημερίας.

Ο περί Κηδεμονίας και Άλλων Τρόπων Μεταχείρισης Αδικοπραγούντων Νόμος του 1996 (Νόμος 46 (I)/1996, άρθρο 5), ορίζει ότι αν το δικαστήριο, καταδικάζοντας πρόσωπο για αδίκημα για το οποίο η ποινή δεν είναι καθορισμένη, είναι της γνώμης, αφού λάβει υπόψη τις περιστάσεις, περιλαμβανομένης της φύσης του αδικήματος και του χαρακτήρα του αδικοπραγούντος, ότι αυτό είναι σκόπιμο, δύναται, αντί να μεταχειριστεί τον αδικοπραγούντα με οποιοδήποτε άλλο τρόπο, να εκδώσει διάταγμα («διάταγμα κηδεμονίας») δυνάμει του οποίου να θέτει τον αδικοπραγούντα υπό την επιτήρηση κηδεμονικού λειτουργού για περίοδο που ορίζεται σε αυτό και η οποία δεν μπορεί να είναι μικρότερη από ένα χρόνο ούτε μεγαλύτερη από τρία χρόνια.

Η επιλογή των όρων του διατάγματος αφήνεται στη διακριτική ευχέρεια του δικαστηρίου, αφού οι όροι μπορούν να ποικίλουν ανάλογα με τις συνθήκες του δράστη, το περιβάλλον και τις ροπές του και την αξιολόγηση της βοήθειας που χρειάζεται για αναμόρφωση. Ο νόμος ρυθμίζει ειδικά την προσφορά κοινοτικής εργασίας ή την υποβολή σε επαγγελματική ή άλλη κατάρτιση, με τη συγκατάθεση του δράστη, και σύμφωνα με τους υπόλοιπους όρους που μπορεί να επιβάλει το Δικαστήριο, κατά τη διάρκεια της δοκιμαστικής περιόδου.

Η επίβλεψη ανατίθεται σε κηδεμονικούς Λειτουργούς των Υπηρεσιών Κοινωνικής Ευημερίας. Εκτός από συμβουλές, καθοδήγηση και βοήθεια, είναι καθήκον του κηδεμονικού Λειτουργού να επιβλέπει ότι το άτομο υπό κηδεμονία τηρεί τους όρους του διατάγματος και υποβάλλει τακτικά στο Δικαστήριο σχετική έκθεση.

2. Οι ρυθμίσεις αυτές αποσκοπούν στην αύξηση των πιθανοτήτων αποκατάστασης, ειδικά για τους νέους παραβάτες, καθώς θα αποφευχθεί η διακοπή των δεσμών με την κοινωνία και το σίγημα του ότι το άτομο έχει διατελέσει στη φυλακή τα οποία, σε μια μικρή χώρα όπως η Κύπρος, δεν μπορούν εύκολα να διαγραφούν.

(ζ) Τρέχουσα αξιολόγηση και μεταρρυθμιστική κατεύθυνση

1. Στην πραγματικότητα, μπορεί με ασφάλεια να λεχθεί ότι υπήρξε και εξακολουθεί να είναι στόκος της εθνικής ποινικής πολιτικής στην Κύπρο, η ανανέωση του ποινικού δικαίου ανηλίκων, η οποία προανατολίζεται στην πρόληψη των εγκλημάτων με τη διευθέτηση και επίλυση των κοινωνικών συγκρούσεων, δίνοντας σε μεγάλο βαθμό έμφαση, στην παράκαμψη της ποινικής διαδικασίας (λ.χ. μεσολάβηση, αποκατάσταση της ζημιάς), στην ανάπτυξη της ιδέας της υπευθυνότητας, στην εμπέδωση της συνείδησης δικαίου των νεαρών κοινωνιών με δικαίες και ανθρωπιστικές εξωδρυματικές κυρώσεις και με την κοινωνική επανένταξη του νεαρού δράστη του εγκλήματος μέσω ενός πλέγματος μέτρων διαπαιδαγώγησης και αρωγής, περιορίζοντας στο ελάχιστο τις στερητικές της ελευθερίας κυρώσεις.
2. Οι εναλλακτικές προσεγγίσεις στην απόνομή δικαιοσύνης σε ανήλικους εφαρμόζονται κατεξοχήν σε πρωτότερους δράστες σε περίπτωση ελαφράς βαρύτητας εγκληματικότητας. Τα δοκιμασθέντα στην πράξη εξωδρυματικά μέτρα (λ.χ. διαμεσολάβηση μεταξύ δράστη και θύματος και ενδεχομένως συμφιλίωση του, κύκλος μαθημάτων κοινωνικής προπόνησης), που εφαρμόζονται υπό την επίβλεψη του Γενικού Εισαγγελέα και σε συνεργασία με το δράστη, αναπληρώνουν σε μεγάλη έκταση τις δικαστικές διαδικασίες και κυρώσεις του ποινικού δικαίου ανηλίκων, χωρίς να επιδεινώνεται ο κίνδυνος της ανάπτυξης παραβατικής συμπεριφοράς. Η αποδοτικότητα των εφαρμοζόμενων εξωδρυματικών μέτρων, έχει αποδειχτεί τόσο πρακτικά όσο και επιστημονικά, γι αυτό εργαζόμαστε για την θεσμοθέτηση τους.

Ειδικότερα οι βασικές τάσεις αντιμετώπισης των ανηλίκων δραστών εγκλήματος, συνοψίζονται μεταξύ άλλων στις ακόλουθες γενικές αρχές:

- Η διαπαιδαγώγηση έχει προτεραιότητα από την ποινή. Η εφαρμογή υποστηρικτικών αντί τιμωρητικών μέτρων σε ανήλικους αποτελεί ουσιώδη κατευθυντήρια αρχή κατά την ποινική αντιμετώπιση ανηλίκων.
  - Οι εξωδρυματικές ή οι κυρίως στερητικές της ελευθερίας κυρώσεις της πολιτείας (υποκατάστατα ή εναλλακτικά μέτρα) έχουν προτεραιότητα από τις ιδρυματικές ή τις στερητικές της ελευθερίας κυρώσεις.
  - Οι άτυπες κυρώσεις έχουν προτεραιότητα από τις τυπικές. Η διάταξη εξωδρυματικών αναμορφωτικών μέτρων από τον κηδεμονικό λειτουργό ή την αστυνομία, πριν από την κίνηση της ποινικής δίωξης ή μετά την κίνηση της ποινικής δίωξης με τη συνδρομή του δικαστή ανηλίκων, θα υπερτερούν των κυρώσεων που μπορούν να επιβληθούν μετά την ακροαματική διαδικασία από το δικαστήριο ανηλίκων.
  - Αναγκαία είναι η μέριμνα για απόλυτο σεβασμό στα από το Σύνταγμα και τις διεθνείς συμβάσεις αναγνωρισμένα θεμελιώδη ανθρώπινα δικαιώματα και στις νόμιμες εγγυήσεις κατά την ποινική αντιμετώπιση της παραβατικότητας των ανηλίκων. Σημαντική είναι η ενίσχυση της νομικής θέσης του ανηλίκου στο σύστημα δικαιοσύνης, με τη διασφάλιση του δικαιώματος πρόσβασης σε δικηγόρο σε όλες τις περιπτώσεις παιδιών, πλην των ήσσονος σημασίας αδικημάτων.
  - Στόκος αποτελεί η αφύπνιση και ενδυνάμωση του συναισθήματος ευθύνης του ανήλικου δράστη για την πράξη του και αυτό επιτυγχάνεται με την σωστή μεταχείρισή τους από τις δημόσιες υπηρεσίες, την εμπειριστατωμένη πληροφόρηση για τα δικαιώματά τους και την προσήκουσα σε αυτά υποστήριξη και βοήθεια, καθώς και η πλήρη ενημέρωση για τις δυνατότητες επιτυχίας των αξιώσεών τους για επανόρθωση και αποκατάσταση της ζημιάς.
  - Τέλος η ιδέα της αγωγής αποτελεί την αποκλειστική κατευθυντήρια αρχή για τον καθορισμό του στόκου και τη διαμόρφωση των βασικών αρχών του περιορισμού σε σωφρονιστικό κατάστημα.
3. Μια σειρά από δικαστικές αποφάσεις κατά τα τελευταία 40 χρόνια δείχνουν ότι η φυλάκιση αποτελεί μέτρο έσχατης λύσης και στην περίπτωση των νεαρών παραβατών ένα μέτρο που πρέπει να αποφεύγεται, εκτός εάν θεωρείται αναπόφευκτο ενόψει της σοβαρότητας του αδικήματος ή της συστηματικής υποτροπής. Παρόλα αυτά, κρίνουμε ως αναγκαία τη νομοθετική κατακύρωση τόσο της παιδαγωγικής αποστολής του ποινικού σωφρονισμού ανηλίκων, όσο και των δικαιωμάτων των φυλακισμένων και τη διαμόρφωση τους ως αγωγών αξιώσεων.  
Με αυτό τον γνώμονα ετοιμάζεται σχετικό νομοσχέδιο, το οποίο μέχρι το τέλος του τρέχοντος έτους αναμένεται να κατατεθεί στη Βουλή των Αντιπροσώπων.
  4. Η ποιότητα της κοινωνίας μας αντικατοπτρίζει την ποιότητα των πολιτών της. Η κυβέρνηση επιθυμεί διακαώς την αναγέννηση της κυπριακής κοινωνίας μέσα από τις ουλές του τραυματισμένου παρελθόντος της, σε μια υγιή κοινωνία με δυνατά παιδιά και δυνατούς ενήλικες, οι οποίοι θα αποτελέσουν τη φρέσκια εικόνα της Κύπρου του αύριο, και θα τραβήξουν με δύναμη μπροστά.
  5. Ως Πολιτεία, αλλά και ως κοινωνία, έχουμε χρέος προς τη νέα γενιά να της παραδώσουμε ως παρακαταθήκη ένα κράτος δικαίου και να τους διασφαλίσουμε το δικαίωμα μιας ελεύθερης, υγιούς ζωής, μακριά από τη βία και το έγκλημα.
  6. Οφείλουμε να στηρίξουμε με κάθε τρόπο την δικαιοσύνη στην Κύπρο, ώστε να κινείται σε ελπιδοφόρα και θετική κατεύθυνση. Οι αρμόδιες αρχές κατανοούν τη δυνατότητα για την παροχή βοήθειας στα θύματα, την αναμόρφωση των νεαρών παραβατών και την ενίσχυση της κοινωνίας στο σύνολό της και πιστεύω ότι αυτό μπορεί να βοηθήσει να οικοδομήσουμε ένα σύστημα ποινικής δικαιοσύνης που θέτει τις ανάγκες των θυμάτων και των δραστών στην καρδιά του.

## Appendix B

### Schools laws and punishments on violations from juvenile offenders in school

Παιδαγωγικά  
Μέτρα

**17.** (1) Τα παιδαγωγικά μέτρα αποβλέπουν στη βελτίωση του μαθητή και στην ενίσχυση της προσωπικής υπευθυνότητας και της αυτοπειθαρχίας του, καθώς επίσης και στη διασφάλιση, μέσα στην εκπαιδευτική κοινότητα, της δημοκρατικής ζωής, που αποτελεί προϋπόθεση για την εύρυθμη και αποδοτική λειτουργία της σχολικής μονάδας:

Νοείται ότι απαγορεύεται η άσκηση κάθε μορφής φυσικής βίας ως παιδαγωγικού μέτρου. Κ.Α.Π. 130/2011

149.3.2

(2) Παιδαγωγικά μέτρα και όργανα λήψης τους—

1. Παιδαγωγικός διάλογος – Διδάσκων καθηγητής, Βοηθός Διευθυντής, Βοηθός Διευθυντής Α΄, Διευθυντής.

2. Παρατήρηση – Διδάσκων καθηγητής, Βοηθός Διευθυντής, Βοηθός Διευθυντής Α΄, Διευθυντής.

3. Επίπληξη – Διδάσκων καθηγητής, Βοηθός Διευθυντής, Βοηθός Διευθυντής Α΄, Διευθυντής.

4. Κοινή γραπτή συμφωνία μεταξύ εκπαιδευτικού και μαθητή/μαθήτριας – με την οποία ο μαθητής δεσμεύεται ότι δε θα επαναλάβει το παράπτωμα και ότι θα τηρεί εφεξής τους κανονισμούς. Τη συμφωνία προσυπογράφει και ο διδάσκων καθηγητής – Διδάσκων καθηγητής.

5. Επίπληξη με γραπτή τεκμηριωμένη ενημέρωση του γονιού – Διδάσκων καθηγητής.

6. Αποβολή από την τάξη και παραπομπή στη Διεύθυνση – Διδάσκων καθηγητής.

7. Αποζημίωση για φθορά περιουσίας του σχολείου ή και άλλων – Βοηθός Διευθυντής, Βοηθός Διευθυντής Α΄, Διευθυντής. Αυτό το παιδαγωγικό μέτρο μπορεί να επιβληθεί παράλληλα με άλλο παιδαγωγικό μέτρο.

Κ.Δ.Π. 130/2011

8. Εκτέλεση κοινωφελούς σχολικής εργασίας που θα στοχεύει κυρίως στην αξιοποίηση των ικανοτήτων/δεξιοτήτων του μαθητή προς όφελος της σχολικής κοινότητας. Η εκτέλεση της κοινωφελούς σχολικής εργασίας πραγματοποιείται κατά τη διάρκεια λειτουργίας του σχολείου, πλην των διαλειμμάτων – Διευθυντής – Καθηγητικός Σύλλογος.

9. Αποβολή ως 2 μέρες – Διευθυντής, Βοηθός Διευθυντής, Βοηθός Διευθυντής Α΄ :

Νοείται ότι η αποβολή μέχρι 2 μέρες μπορεί να επιβληθεί και με αναστολή.

Κ.Δ.Π. 130/2011

10. Γραπτή προειδοποίηση με κοινοποίηση προς τους γονείς για αλλαγή τμήματος – Παιδαγωγική Ομάδα.

11. Αλλαγή τμήματος (γίνεται μόνο μια φορά) – Καθηγητικός Σύλλογος.

12. Αποβολή 1-4 μέρες – Διευθυντής.

13. Αποβολή 1-6 μέρες – Πειθαρχικό Συμβούλιο.

14. Αποβολή 1-8 μέρες – Καθηγητικός Σύλλογος.

15. Αποβολή από το σχολείο που φοιτά για πάντα με δικαίωμα εγγραφής σε άλλο σχολείο – Καθηγητικός Σύλλογος.

Πίνακας  
(βλέπε σελ. 15022  
και 15032)

(3) Για τα παραπτώματα και τις συμπεριφορές που αναφέρονται στον επισυναπτόμενο Πίνακα, στο τέλος των Κανονισμών αυτών, μπορούν να ληφθούν διαζευκτικά οποιαδήποτε από τα παιδαγωγικά μέτρα που αναφέρονται στην τρίτη στήλη του Πίνακα αυτού, αφού ληφθεί σοβαρά υπόψη η συμπεριφορά του μαθητή στο σύνολό της.

(4) Ο καταγγελλόμενος μαθητής έχει το δικαίωμα να ακουστεί τόσο πριν από τη λήψη απόφασης αναφορικά

149.4.2

ΠΙΝΑΚΑΣ  
[ΚΑΝΟΝΙΣΜΟΣ 17 (3)]

ΣΥΜΠΕΡΙΦΟΡΑ		ΠΡΟΤΕΙΝΟΜΕΝΑ ΠΑΙΔΑΓΩΓΙΚΑ ΜΕΤΡΑ	
1. Φοίτηση, εμφάνιση Γενική Συμπεριφορά	(α) Συστηματική καθυστέρηση προσέλευσης στην τάξη	ΚΑΝΟΝΙΣΜΟΣ 17.(2) 1-5	
	(β) Απουσία από μάθημα ή σχολική εκδήλωση χωρίς άδεια	ΚΑΝΟΝΙΣΜΟΣ 17.(2) 1-5, 8, 9	
	(γ) Αποχώρηση από το σχολείο ή σχολική εκδήλωση χωρίς άδεια	ΚΑΝΟΝΙΣΜΟΣ 17.(2) 1-5, 8, 9	
	(δ) Έξοδος από το σχολικό χώρο χωρίς άδεια	ΚΑΝΟΝΙΣΜΟΣ 17.(2) 1-5, 8, 9	
	(ε) Ψευδείς δηλώσεις - παραποίηση και/ή καταστροφή σχολικών εγγράφων	ΚΑΝΟΝΙΣΜΟΣ 17.(2) 1-5, 8, 9	
	(στ) Παρά τις συστάσεις, συστηματική παρέκκλιση από τους κανονισμούς για ευτρεπή εμφάνιση	ΚΑΝΟΝΙΣΜΟΣ 17.(2) 1-5, 8, 9	
	(ζ) Παρεμπόδιση της ομαλής διεξαγωγής μαθήματος ή άλλων σχολικών εκδηλώσεων	ΚΑΝΟΝΙΣΜΟΣ 17.(2) 1-6, 8, 9	
	(η) Κινητά τηλέφωνα: (Κ.Δ.Π 297/2009)		
	(i) Παρουσία κινητού τηλεφώνου, εκτός ώρας διαλείμματος (τάξη/συγκέντρωση/εκδήλωση)	1η φορά: Παρατήρηση, 2η φορά: 3 περίοδοι αποβολή με αναστολή, 3η φορά: 1 μέρα αποβολή. Συνέχιση του παραπτώματος: Μέχρι 1 μέρα αποβολή κάθε φορά.	
	(ii) Ενεργοποίηση κινητού τηλεφώνου, εκτός ώρας διαλείμματος (τάξη/συγκέντρωση/εκδήλωση)	1η φορά: 1 μέρα αποβολή με αναστολή, 2η φορά: 1 μέρα αποβολή, 3η φορά: 1 μέρα αποβολή. Συνέχιση παραπτώματος: Μέχρι 2 μέρες αποβολή κάθε φορά.	
(iii) Χρήση κινητού τηλεφώνου κατά τη διάρκεια της ημέρας, εκτός ώρας διαλείμματος (τάξη/συγκέντρωση/εκδήλωση)	1η φορά: 1 μέρα αποβολή με αναστολή, 2η φορά: 1 μέρα αποβολή, 3η φορά: 1 μέχρι 2 μέρες αποβολή. Συνέχιση παραπτώματος: Μέχρι 3 μέρες αποβολή κάθε φορά.		
(iv) Παραβίαση προσωπικών δεδομένων με τη χρήση κινητού τηλεφώνου	Ανάλογα με την κάθε περίπτωση, το παράπτωμα θα παραπέμπεται στο Πειθαρχικό Συμβούλιο του σχολείου, το οποίο θα έχει τη δυνατότητα να επιβάλει από 1-6 μέρες αποβολή ή/και να παραπέμψει το παράπτωμα στον Καθηγητικό Σύλλογο, ο οποίος θα μπορεί να αποφασίσει μέχρι και την αποβολή από το σχολείο που φοιτά ο μαθητής/τρια για πάντα, με δικαίωμα εγγραφής σε άλλο σχολείο.		

	(θ) Κυκλοφορία με μηχανοκίνητο όχημα στο σχολικό χώρο σε ώρα λειτουργίας του σχολείου, πλην της προσέλευσης και αποχώρησης στο ή από το σχολείο.	ΚΑΝΟΝΙΣΜΟΣ 17.(2) 1-5, 8, 9
	(ι) Χρήση ιδιωτικού μεταφορικού μέσου σε εκδρομή ή άλλη σχολική εκδήλωση σε εργάσιμο χρόνο.	ΚΑΝΟΝΙΣΜΟΣ 17.(2) 4, 5, 8, 9
	(κ) Αδικοποιώγητη συνεννοητροφή με εξωσχολικούς κατά τη διάρκεια λειτουργίας του σχολείου χωρίς άδεια.	ΚΑΝΟΝΙΣΜΟΣ 17.(2) 1-5, 8, 9
2. Κάπνισμα και χρήση αναπνευματικών ποτών στο σχολικό χώρο ή σε σχολικές εκδηλώσεις.		ΚΑΝΟΝΙΣΜΟΣ 17.(2) 1-5, 8, 9
3. Αδικήματα κατά της περιουσίας.	(α) Κλοπή/κετόπειρα κλαπής εντός ή εκτός του σχολικού χώρου.	ΚΑΝΟΝΙΣΜΟΣ 17.(2) 1-5, 8, 9, 12, 13
	(β) Αναγκραφή τξικατικών/προσβλητικών ή άλλων συνθημάτων.	ΚΑΝΟΝΙΣΜΟΣ 17.(2) 1-5, 8, 9
	(γ) Κακόβουλη ζημιιά περιουσίας εντός ή εκτός του σχολικού χώρου	ΚΑΝΟΝΙΣΜΟΣ 17.(2) 1-5, 7, 8, 9, 12, 13
	(δ) Διάρρηξη/κετόπειρα διάρρηξης	ΚΑΝΟΝΙΣΜΟΣ 17.(2) 1-5, 7, 8, 9
	(ε) Εμπρησμός/κετόπειρα εμπρησμού	ΚΑΝΟΝΙΣΜΟΣ 17.(2) 7, 8, 9, 12, 13
4. Κατοχή και μεταφορά επικίνδυνων αντικειμένων στο σχολικό χώρο ή σε σχολικές εκδηλώσεις.		ΚΑΝΟΝΙΣΜΟΣ 17.(2) 1-6, 8, 9, 12, 13
5. Αδικήματα	(α) Υβριστική συμπεροφορά και/ή λεκτική βία.	ΚΑΝΟΝΙΣΜΟΣ 17.(2) 1-6, 8, 9
	(β) Σεξουαλική παρενόχληση	ΚΑΝΟΝΙΣΜΟΣ 17.(2) 1-6, 8-12
	(γ) Ειροβριστική και απειλητική συμπεροφορά	ΚΑΝΟΝΙΣΜΟΣ 17.(2) 1-6, 8-13
	(δ) Σωματική βία με ή χωρίς αντικείμενο	ΚΑΝΟΝΙΣΜΟΣ 17.(2) 1-6, 8-15
	(ε) Σωματική βία σεξουαλικής φύσεως	ΚΑΝΟΝΙΣΜΟΣ 17.(2) 13, 14, 15
6. Παράνομη κατοχή-χρήση-εμπορία δικαίνηση ναρκωτικών φαρμάκων, ψυχοτρόπων ουσιών, εκτός αν χρησιμοποιούνται αποδεδειγμένα με ιατρική συνταγή. Νοείται ότι κατά την διαδικασία εξέτισης του παραπτώματος αυτού ζητείται η άποψη του οικείου εκπαιδευτικού ψυχολόγου. Σε περίπτωση αποδεδειγμένης διάρρηξης του αδικήματος αυτού, ο μαθητής παραιτείται στην υπεροσία εκπαιδευτικής ψυχολογίας για ανάλογο χειρισμό.		ΚΑΝΟΝΙΣΜΟΣ 17.(2) 1-5, 13, 14, 15

150.3.2

Appendix C

Social interview measuring successful way avoiding incarceration within CU groups -  
English

<b>Occurrence of times got caught</b>	<b>Occurrence of times did not get caught</b>
<b>School</b>	<b>School</b>
Have you ever been caught in school for doing something against the rules? e.g. cheat How often? What happened?	Have you ever done anything against the school's rules where you did not get caught? What did you do? Why did not you get caught?
What were the consequences (e.g. sent to the principles' office)? If there were no consequences, why?	
Have you ever had detention in school? How many times? For what? Have you ever been suspended from school? How many times? For what? Have you ever been expelled from school? How many times? For what?	
<b>Society</b>	<b>Society</b>
Have you ever gotten in trouble outside of home or school for doing something against the rules? How often? What happened?	Have you ever done anything against the rules outside of home or school where you did not get caught? What did you do? Why did not you get caught?
Did the police ever catch you for doing something illegal? How often? What happened? Where there any consequences/ punishments? What were they? If not, why not?	Have you ever done something illegal where you did not get caught? What did you do? How come you never got caught?

Appendix D

Social interview measuring successful way avoiding incarceration within CU groups -  
Greek

<b>Occurrence of times got caught</b>	<b>Occurrence of times did not get caught</b>
<b>School</b>	<b>School</b>
Έχεις ποτέ πιαστεί στο σχολείο επειδή έκανες κάτι ενάντια στους κανόνες; Π.χ. Αντιγραφής; Πόσο συχνά; Τι έγινε;	Έχεις κάνει ποτέ κάτι ενάντια στους κανόνες στο σχολείο για το οποίο δεν σε πιάσανε; Τι έκανες; Πως και δεν σε πιάσανε;
Ποιες ήταν οι συνέπειες (π.χ. σε στείλανε στο γραφείο του διευθυντή); Αν δεν υπήρχαν συνέπειες, γιατί;	
Έχεις ποτέ τιμωρία στο σχολείο; Πόσες φορές; Για ποιο πράγμα; Έχεις ποτέ αποβληθεί από το σχολείο; Πόσες φορές; Για ποιο πράγμα; Σε έχουν διώξει ποτέ από το σχολείο; Πόσες φορές; Για ποιο πράγμα;	
<b>Society</b>	<b>Society</b>
Είχες ποτέ μελάδες εκτός του σπιτιού ή του σχολείου επειδή έκανες κάτι ενάντια στους κανόνες; Πόσο συχνά; Τι έγινε;	Έχεις κάνει ποτέ κάτι ενάντια στους κανόνες εκτός σπιτιού και σχολείου για το οποίο δεν σε πιάσανε; Τι έκανες; Πως και δεν σε πιάσανε;
Σε έχει πιάσει καμιά φορά η αστυνομία επειδή έκανες κάτι παράνομο; Πόσο συχνά; Τι έγινε; Υπήρχαν συνέπειες/τιμωρίες; Τι ήταν; Αν όχι, γιατί;	Έχεις κάνει κάτι παράνομο για το οποίο δεν σε πιάσανε; Τι έκανες; Πως και δεν σε πιάσανε;

## Appendix E

### Sample of transcripts for thematic analysis

**20138** (E/Σ = Ερώτηση/συνεντευκτής, Α = Απάντηση/Συνεντευξιαζόμενος)

E: Έχεις πιαστεί ποτέ στο σχολείο, επειδή έκαμες κάτι ενάντια στους κανόνες;

A: Ε, όι.

E: Ok. Δαμέ μιλώ και για μικρά πράματα, όπως η αντιγραφή ή να ακούμε headphones μες στην τάξη ή να φορούμε...

A: Όι, όι.

E: Ποτέ ας πούμε για τίποτε ε σου έκαμαν παρατήρηση;

A: Όι, εκάμαν μου (-δεν ακούγεται καθαρά-)

E: Ε, έχεις, είχες ποτέ τιμωρία στο σχολείο;

A: Όχι.

E: Αποβληθεί;

A: Όχι.

E: Να σε διώξουν από το σχολείο;

A: Όχι.

E: Να μείνεις από απουσίες;

A: Όχι.

E: Μχμ. Είχες ποτέ μελάδες στο σπίτι επειδή έκαμες κάτι ενάντια στους κανόνες;

A: Όχι.

E: Ok. Δηλαδή εδώ μιλώ και για μικρά πράγματα. Για ψέματα, να έπιασες λεφτά από την τσάντα της μάμας χωρίς να της το πεις...

A: Όχι.

E: Δηλαδή ποτέ σου ας πούμε εν ετσακώθηκες με τους γονείς σου;

A: Όχι, ποτέ.

E: A! Ok. Εμ, τώρα. Είχες ποτέ μελάδες εκτός του σπιτιού ή του σχολείου επειδή έκαμες κάτι ενάντια στους κανόνες;

A: Όχι, βασικά.

E: Εδώ μιλώ και για καυγάδες με συγγενείς, μικροκαυγάδες με γείτονες σόρρου, να έπιασες κάτι από έναν κατάστημα, στην μπάλα...

A: Όχι, όχι, όχι.

E: Ok. Σ' έχει πιάσει καμιά φορά η αστυνομία επειδή έκαμες κάτι παράνομο;

A: Όχι.

E: Έχεις κάμει ποτέ κάτι ενάντια στους κανόνες του σχολείου, για το οποίο δε σ' έπιασαν;

A: Όχι, όχι. (γελάει)

E: Ok. Δαμέ πάλι μιλώ για αντιγραφή, εεμ...

A: Ναι, ναι. Όχι.

E: Ok. Άρα είσαι ο πιο τίμιος μαθητής του κόσμου; (γελάει)

A: Ναι.

E: (γελάει) Ok. Να 'σαι πολλά περήφανος για τούτο! Εεμ, έχεις κάμει ποτέ κάτι ενάντια στους κανόνες του σπιτιού για το οποίο δε σ' έπιασαν;

A: Όχι.

E: Ok. Έχεις κάνει ποτέ κάτι ενάντια στους κανόνες εκτός σπιτιού ή σχολείου, για το οποίο δεν σ' έπιασαν;

A: Όχι.

E: Μχμ. Έκαμες κάτι παράνομο για το οποίο δεν σ' έπιασε η αστυνομία;

A: Όχι.

E: Ok. Λοιπόν, δηλαδή για να καταλάβω, (γελάει) επειδή ακούεται μου λίγο παράξενο, ε, στο σχολείο ας πούμε, πάντα πάεις με τη στολή σου;

A: Ναι.

E: Ok. Ποτέ εν άκουσες με τα headphone σου μες στην τάξη; Μουσική;

A: Όχι. Όχι, ποτέ.

E: Ποτέ εν έφκαλεις το το το κινητό πα στο θρανίο ας πούμε, να δεις ένα μήνυμα, να γράψεις ένα μήνυμα;

A: Όχι.

E: Ποτέ εν αντέγραψες (γελάει), ούτε μία λέξη;

A: Όι, ποτέ μου. Μόνον άμαν είμαι διάλειμμα, τότε ναι, μπορεί να δω τα (-ακατανόητο-) μου. Άμα εν έκανα τα μαθήματά μου, ... (-ακατανόητο-)

E: Ουάου, ουάου! Ok. Εντάξει. Εν που έκπληξη που ξανακάμνω τούτες τες ερωτήσεις, ότι να το πάρεις που κακόν μάτι. Απλά εκπλήσσει με.

A: Όι.

## 20141

E: Θα ήθελα να πούμε για συμπεριφορές που κάνουμε ενάντια στους κανόνες. Εμ, επιάστηκες καμιά φορά στο σχολείο, επειδή έκαμες κάτι ενάντια στους κανόνες;

A: Ναι, καλό.

E: Μχι. Για πες μου. Δηλαδή πόσο συχνά γίνεται τούτο;

A: Ε, ας πούμε μπορεί να μη φκω έξω, στην τάξη, να μην [..?] τη μαθητική στολή, τούτα. Να κάνω ... στα θρανία, στους τοίχους, ξέρω 'γω, τούντα πράματα... Εντάξει, αυτά.

E: Αντιγραφής;

A: Που τους άλλους;

E: Μχι.

A: Ε, όταν χρειάζεται, ναι.

E: Ε, ξέρω 'γω, headphones μες στην τάξη για να ακούεις μουσική κτλ;

A: Όταν κάνουμε μάθημα, ότι.

E: Μμμ, να φκεις που την τάξη χωρίς άδεια; Εννοώ να είσαι μέσα στο μάθημα, και να φκεις χωρίς άδεια ξέρω 'γω; Ή να φκεις που το σχολείο χωρίς άδεια εξόδου;

A: Ναι, καλό.

E: Ok. Νάταλη μου, που τούτα δαμέ που μου ανέφερες, για ποια που τούτα ετιμωρήθηκες;

A: Για ποια που τούτα τιμωρήθηκα.

E: Ναι.

A: Εε, σε κανένα βασικά. Μόνο μια φορά, τάχα ήμουνα έξω. Ντάξει, πιαν τη μάμα μου τηλέφωνο, αλλά ντάξει, όχι τίποτα το ιδιαίτερο.

E: Μχι, ok. Στα άλλα ούλα δηλαδή πώς και εν σε, πώς και εν ετιμωρήθηκες;

A: Εεε, όλο θυμώνουν βασικά. Αλλά δεν κάνουν τίποτε.

E: Δηλαδή;

A: Ε, ας πούμε όπως τη στολή που είχε κοπεί, εν ελάλουν κάτι [... ακατανόητο] γιατί εν τη εφόρεςες.

E: Ok. Ε σου λαλούν εσένα όμως, ή εν λαλούν γενικά; Στα άτομα.

A: Όχι, ε λαλούν γενικά. Ε λαλούν ας πούμε.

E: Ok. Άρα εννοείς ότι εν το θεωρούν τόσο σοβαρό κανονισμό τον οποίον πρέπει να τηρηθεί;

A: Ναι, καλό. Θεωρούν πιο σοβαρό τη συμπεριφορά μας παρά τα ρούχα μας.

E: Ok. Άρα αν πάμε τότε σε συμπεριφορές, σε συμπεριφορές τότε; Ετιμωρήθηκες σε κάτι;

A: Όχι, γιατί νομίζω η συμπεριφορά μου είναι μια χαρά απέναντι στους μεγαλύτερους και σέβομαι κάποια πράματα.

E: Ok. Ωραία. Εμ, άρα έκαμες τούτα τα πράγματα, για να καταλάβω εγώ τωρά, κάμνεις τούτα τα πράματα, απλά δεν τιμωρείσαι ότι επειδή εκατάφερες και ξέφυγές τους, αλλά επειδή εν τιμωρούν γενικά.

A: ναι, τούτα τα θκυο βασικά.

E: Ok. Άρα, αν εκατάλαβα καλά, υπήρχαν και φορές που τους εξέφυγες.

A: Ναι, έτυχε.

E: Μχι. Με ποιον τρόπο κατάφερες κι εξέφυγές τους;

A: E, άμαν είσαι καλός με τον άλλον, και κάποιος σε εμπιστεύεται πραγματικά, τότε εν ηβλέπει ας πούμε τα αρνητικά σου, μόνον τα θετικά σου βλέπει.

E: Μχμ, ok. Πέραν του να πιαν τη μάμα σου τηλέφωνο, τι άλλην τιμωρίαν είχες, έφραες ως τώρα;

A: E, καμιάν άλλην τιμωρία.

E: Ok. E, αποβολές ή να σε διώξουν που την τάξη, ή να σε διώξουν που το σχολείο ξέρω 'γω, έτσι πράματα;

A: Αποβολή μόνον που την τάξη αν έφραα.

E: Μχμ. Για ήντα πράμα;

A: [...?] που την τάξη.

E: Μχμ. A, ήταν εκείνο που μου ανέφερες πριν. Ωραία, λοιπόν. Επόμενη ερώτηση. Είχες ποτέ μπελάδες στο σπίτι επειδή έκαμες κάτι ενάντια στους κανόνες;

A: E, ναι. Ότι ήμουνα έξω, εντάξει, μου είπε η μάμα μου αυτό για την τάξη, απάντησα κι εγώ γιατί εβαρκούμασαν να μπούμε... Αυτό ντάξει, έληξε.

E: Ok. Πέραν τούτου, δηλαδή έκαμες κάτι άλλο για το οποίο ετιμωρήσα σε, ας πούμε;

A: Όι. Εν με ετιμωρήσαν.

E: E, για παράδειγμα ψέματα, ή να φύεις σκαστός που το σπίτι, να πιάεις κάτι που την τσάντα της μάμας ή του παπά ξέρω 'γω; Τούτα τα πράματα. Ψάχνω και μικρά ας πούμε, δε ψάχνω μόνο μεγάλα.

A: Όι, ποτέ μου. Ντάξει, μπορεί ας πούμε να πιάω λεφτά ας πούμε ξέρω 'γω, αλλά ντάξει, ok. Εν και κάτι το...

E: Μχμ, ok. E, λοιπόν, επόμενη ερώτηση. Είχες ποτέ μπελάδες εκτός του σπιτιού ή του σχολείου, επειδή έκαμες κάτι ενάντια στους κανόνες;

A: Eε, όι.

E: Ok. Eδώ ψάχνω παραπάνω έτσι για το αν επιάσαμεν κάτι που κάποιο κατάστημα χωρίς να το πληρώσουμε ή ας πούμε φασαρίες με γείτονες, έτσι πράματα ας πούμε. Απλά πράματα, μπορεί να 'ν και κάτι μικρό. E σημαίνει να 'ν τόσο σοβαρό ή μεγάλο θέμα.

A: Όι, ποτέ μου.

E: Ok. Λοιπόν, τώρα, έπιασε σε καμιά φορά η αστυνομία επειδή έκαμες κάτι παράνομο;

A: Όι.

E: Μχμ, ok. Eδώ ψάχνω ας πούμε ξέρω 'γω για φασαρίες, για θέματα γήπεδων, αν είχες τσακωμούς ή κάτι ξέρω 'γω, τούτα τα πράματα.

A: E, κοίταξε στο γήπεδο πάντα πάω, αλλά όι σε τσακωμούς κι έτσι πράματα.

E: Ok. Άρα εν υπήρχε καμιά επαφή με την αστυνομία εννοείς μέχρι στιγμής.

A: Ναι, καμιά. Ούτε και το ελπίζω. (γελάει)

E: Μχμ. (γελάει) Τώρα, έκαμες κάτι ενάντια στους κανόνες του σχολείου, αλλά ε σ' έπιασαν; Δηλαδή είπες μου πριν για κείνα τα πράματα ότι έκαμες, είδαν σε, αλλά εν σ' ετιμωρήσαν απλά επειδή γενικά εν τιμωρούν.

A: Ναι.

E: Είχεν άλλες φορές όμως που έτσι εγλίτωσές το λόγω των δεξιοτήτων σου ας πούμε; Να χειρίζεσαι κάποιες καταστάσεις;

A: όι. Μόνο τούτα τα πράματα έκανα. Εν έκανα κάτι το πολλά μεγάλο. Όι, μον' τούτα.

E: Ok. E, άρα να κρατήσω εγώ κείνα τα πράματα που αναφέραμε πριν.

A: Ναι, ναι.

E: Ok. E, έκαμες κάτι ενάντια στους κανόνες του σπιτιού για το οποίο δεν σε έπιασαν;

A: Όπως;

E: E, όπως είναι τα πράματα που σου είπα πριν. Ξέρω 'γω να πιάσεις κάτι που την τσάντα της μάμας χωρίς να την ενημερώσεις ή ψέματα ή το να σηκωστεις να φύεις που το σπίτι. Απλά δαμέ ρωτώ κατά πόσο εν τω εκαταλάβαν, εν σε επιάσαν ας πούμε.

A: E, όι. Όπως είπα σου πριν [...] αν χρειαστεί να πιάσω κάτι ας πούμε για λεφτά που το χρειάζομαι και μπορεί να ξεχάσω να μην τους το πω ή οτιδήποτε.

E: Μχμ, ok. Εν κάτι το οποίον, εννοείς ότι μετά έδωσές τους τα πίσω, βοήθα με λίο να το καταλάβω.

A: Όι. Επειδή εκείνα τα λεφτά χρειάζουμουν τα ήταν χωρίς επιστροφή.

E: Μμμ, άρα δαμέ εν εκατάλαβαν ας πούμεν ότι έπιασες τούτα τα λεφτά.

A: Όι.

E: Μχμ, ok. Πώς και εκατάφερες και εξεγέλασές τους; Εννοώ με την έννοια ήντ' άλλως και εν εκατάλαβαν ότι έπιασες τους λεφτά.

A: E, εντάξει, και να το καταλάβουν εν και να πουν κάτι. Αλλά δε θα το κάνω, δε θα το κρύψω, δε θα το κάνω ψέμα ας πούμε. Γιατί μπορεί κάτι να χρειάζουμουν, κάτι να αγόρασα, οτιδήποτε.

E: Μχμ, ok. E, λοιπόν, τώρα. Έκαμες κάτι ενάντια στους κανόνες εκτός του σπιτιού ή του σχολείου για το οποίο δε σ' έπιασαν;

A: Όι.

E: Μχμ. Δαμέ πάλι εννοώ να έπιασες κάτι από κάποιο κατάστημα χωρίς να το πληρώσεις, φασαρίες με τους γείτονες κτλ κτλ.

A: Εν έχω.

E: Ωραία. Έκαμες κάτι παράνομο για το οποίο δε σε έπιασε η αστυνομία, δεν κατάφερε να σε πιάσει η αστυνομία;

A: Όχι.

E: Μχμ, ωραία.

## 20175

E: Τώρα εν να ήθελα να σε ρωτήσω έτσι για κάποιες συμπεριφορές που κάμνουμε ενάντια στους κανόνες. Εσύ επιάστηκες καμιά φορά στο σχολείον, επειδή έκαμες κάτι ενάντια στους κανόνες του σχολείου;

A: Τι εννοείς επιάστηκα;

E: Εννοώ εκατάλαβαν το ας πούμε; Ετιμωρήσαν σε;

A: A, ναι.

E: Μχμ. Σαν τι δηλαδή;

A: E, για το κάπνισμα.

E: Ok. Πόσο συχνά...

A: Για εξωσχολικά ρούχα.

E: Ok. Αρκετά καλά. Εμ, πόσο συχνά γίνεται τούτο; Πόσο συχνά σε πιάσαν ας πούμε για το κάπνισμα;

A: Για το κάπνισμα, επιάσαν με μια φορά στις αρχές του χρόνου, αλλά τώρα εντάξει, ε μου λαλούν κάτι.

E: Ok. Πώς και ε σου λαλούν δηλαδή τώρα;

A: Επειδή βρέθηκαν [...] (γελάει)

E: Ok. (Γελάει) Αλλά μία φορά μόνο ετιμωρήθηκες, εννοείς;

A: Ναι.

E: Μχμ, ποια ήταν η συνέπεια, δηλαδή;

A: E, τέσσερις περιόδους αποβολή.

E: Ok. Ενώ για τα εξωσχολικά ρούχα;

A: Εξωσχολικά ρούχα, ντάξει, κάθε μέρα που μου λαλούν.

E: Ok. Μχμ. Άρα η συνέπεια...

A: Αλλά δυο φορές μου εβάλασι αποβολή.

E: Ok. Ωραία. Κάλι άλλο το οποίον, για το οποίον επιάστηκες επειδή έκαμες κάτι ενάντια στους κανόνες του σχολείου;

A: Όι.

E: Ok. Εμ, τούτο που σκέφτομαι εγώ είναι η αντιγραφή, καμιά φορά να σε πιάσαν επειδή αντέγραφες;

A: Όι, όι.

E: Εμ, συνήθως οι άλλοι μαθητές λεν μου για headphones που ακούν μουσική εν ώρα της τάξης...

A: Ναι ακούω μες στην τάξη, αλλά εντάξει, ε μου είπασι ποτέ κάτι.

E: Πώς και ε σου λαλούν κάτι; Πώς και ε σ' επιάσασι καμιά φορά;

A: Ε, με τους καθηγητές που ακούω μες στην τάξη, εε, ε δείχνουν να τους κόφτει ή κάτι.

E: Μχμ. Ok. Μχμ. Άρα, δε φαίνεται να τους ενδιαφέρει βασικά εκείνο που κάμνεις εννοείς.

A: Ναι, [...] μες στην τάξη. Κοιτούν να κάνουν το μάθημά τους.

E: Ok. Ξέρω 'γω, έφυες καμιά φορά που το σχολείον ή που την τάξη χωρίς να ενημερώσεις, και ετιμωρήθηκες για τούτο;

A: Όι, όι.

E: Ok. Ωραία. Άρα, σύνολον εσύ έχεις αποβληθεί τρεις φορές, δηλαδή;

A: Ναι.

E: Ή έχεις αποβληθεί κι άλλες φορές;

A: Όι, μόνον τρεις.

E: Μχμ. Κάποιαν άλλη τιμωρίαν είχες στο σχολείο;

A: Όι.

E: Ok. Εδιώξα σε καμιά φορά που το σχολείο;

A: Όι.

E: Ok. Λοιπόν, τώρα. Είχες ποτέ μπελάδες στο σπίτι, επειδή έκαμες κάτι ενάντια στους κανόνες;

A: Εεεμ, όι.

E: Ok. Δαμέ ψάχνω και για μικρά πράγματα. Ξέρω 'γω ψέματα, να πιάσεις κάτι που την τσάντα της μάμας, να φύεις που το σπίτι χωρίς να τους ενημερώσεις...

A: Όι, όι.

E: Ok. Άρα, εν έχεις ποτέ μπελάδες στο σπίτι δηλαδή;

A: Όι.

E: Ok.

A: Πάω τα πάντα καλά, όπως σας είπα πριν.

E: Μχμ. Ok. Είχες ποτέ μπελάδες εκτός του σπιτιού ή του σχολείου, επειδή έκαμες κάτι ενάντια στους κανόνες;

A: Εεε, ναι.

E: Δηλαδή;

A: Για καυγά.

E: Ok. Πόσο συχνά έγινε τούτο;

A: Πόσο συχνά εννοείτε για καυγά; Εε, εν γίνεται συχνά, αλλά έγινε πολλές φορές.

E: Και ποιες ήταν οι συνέπειες, Άντριά μου;

A: Ε, μια φορά ήμουν στο mall, επιά με οι security...

E: Μχμ, ok.

A: Αλλά ντάξει, τις υπόλοιπες δεν είχε συνέπειες. Ούτε αστυνομία, ούτε κάτι.

E: Ok. Ήντ' άλλως κι εγλίτωσες την δηλαδή;

A: Εε.. (γελάει) [...] κι έφυγα.

E: ok. Άρα προσπάθησες να το κάμεις, χωρίς να έχεις, ήντ' άλλως το λαλούν;

A: [...] οι αστυνομικοί ή κάτι.

E: Και που ε θα σε δουν γενικά εννοείς.

A: Ναι, ναι.

E: Μχμ, ok. Άρα να καταλάβω ότι η αστυνομία ε σ' έπιασε μέχρι στιγμής για κάτι παράνομο που έκαμες;

A: όι.

E: Ok. Εεεμ, ωραία. Τώρα. Έκαμες κάτι ενάντια στους κανόνες του σχολείου, αλλά εν τω εκαταλάβαν; Δηλαδή, ας πούμε, είπες μου για το κάπνισμα εκουρασθήκαν σε κάποια φάση απλά να σου κάμνουν παρατήρηση.

A: Ναι.

E: Έχει κάτι άλλο το οποίο έκαμες, αλλά εν τω εκαταλάβαν; Εκατάφερές κι εξέφυγες τους ας πούμε;

A: Όι.

E: Ok. Τίποτα στο σχολείον; Ούτε αντιγραφή ξέρω 'γω, έτσι πράματα;

A: Μμμ, όι.

E: Μχμ, εε, έκαμες κάτι ενάντια στους κανόνες του σπιτιού για το οποίο δεν το εκαταλάβαν ας πούμε;

A: E, όι.

E: Μχμ. Ok. Ψάχνω ακόμα και για μικρά πράγματα. Για να μεν νομίζεις ότι θέλω κάτι μεγάλο ξέρω 'γω.

A: Ναι, κατάλαβα. Αλλά ντάξει, εν έκαμα, όι.

E: Μχμ, μχμ. Ok. Είχες κάτι ποτέ κάμει ενάντια στους κανόνες εκτός σπιτιού ή του σχολείου, για το οποίο πάλε ε σε πιάσαν; E, είπες μου μέχρι στιγμής για τους καυγάδες εκτός σπιτιού ή σχολείου. Έκαμες κάτι άλλο το οποίο εκατάφερές κι εξέφυγες;

A: E, όι.

E: Ok. Και έκαμες κάτι παράνομο για το οποίο η αστυνομία εν εκατάφερε να σε πιάσει;

A: Όι.

E: Μχμ, ok.

**20257**

Σ: Έτυχε καμιά φορά να πιαστείς επειδή έκανες κάτι ενάντια στους κανόνες τους σχολείου;

A: Όχι

Σ: Αχμ. Άρα καμιά φορά δεν έτυχε να τιμωρηθείς;

A: Ω.. E.. Δεν είχα

Σ: Τι;

A: Ποιο; Πε μου ξανά;

Σ: Λέω δεν έτυχε καμιά φορά να τιμωρηθείς ή να έχεις παρατήρηση ή να σε στείλουν στο γραφείο του διευθυντή ή του υποδιευθυντή;

A: Όχι όχι όχι

Σ: Ok. Να σε ρωτήσω κάποια πράγματα έτσι που ρωτώ και τους άλλους συνομηλίκους σου, να μου πεις αν σου ακούγονται γνώριμα. Ok; Αν είναι κάτι το οποίο έτυχε να κάνεις καμιά φορά. Εμ, να αντιγράψεις, να μιλάς μέσα στην τάξη, ενώ δεν επιτρέπεται, να φορείς headphones, να ακούεις μουσική, να φορείς άλλα ρούχα από αυτά που επιτρέπονται. Εμ να φύγεις από το σχολείο ή την τάξη χωρίς άδεια, ή να αργήσεις να έρθεις στο σχολείο ή στην τάξη, να καπνίζεις στο σχολείο. Αυτά.

A: E το τελευταίο που είπες, δεν καπνίζω γιατί είμαι μικρός, παίζω άθλημα. Δεν είναι κάτι καλό για να κάνουμε. Για να ακούω μουσική ή να πηγαίνω με άλλα ρούχα στο σχολείο από αυτά που μας έχει ο νόμος, δεν πηγαίνω με άλλα ρούχα.

Σ: Χμ

A: Να μιλώ στην τάξη, κάποτε αν μας πει ο δάσκαλος γράψετε και πες τελειώσω, μπορεί να.. Να αντιγράψω, κάποτε, ε αυτά.

Σ: Έτυχε καμιά φορά από όλα αυτά που μου είπες να σε πιάσει ο δάσκαλος ή κάποιος άλλος; Ενωώ να σε καταλάβει;

A: Όχι

Σ: Ok

A: Να μιλώ ναι, αλλά τα άλλα όχι..

Σ: Έτυχε να σου κάνει παρατήρηση δηλαδή;

A: Ναι είπε μου κάποτε, Γιάννη σιώπα να γράψουν οι άλλοι φίλοι σου συγκεντρωμένα.

Σ: Δεν υπήρξε κάτι συγκεκριμένο δηλαδή;

A: Όχι.

Σ: Οκ, Γιάννη μου έτυχε καμιά φορά να αποβληθείς ή να σε διώξουν από το σχολείο ας πούμε, ή να έχεις κάποια άλλη τιμωρία;

A: Όχι, δεν είχα

Σ: Οκ. [άλλες ερωτήσεις]

Σ: Τώρα έτυχε κάτι εκτός του σχολείου ή του σπιτιού ή ξέρω γω στο ποδόσφαιρο ή σε καμιά μπάλα/ αγώνα ή στη γειτονιά, να κάνεις κάτι ενάντια στους κανόνες αλλά να φας κάποια τιμωρία; Να έχεις κάποιες συνέπειες;

A: Όχι

Σ: Οκ. Εδώ κάποιες άλλες ερωτήσεις που ρωτώ είναι αν έπιασες κάτι από κάποιο κατάστημα χωρίς να το πληρώσεις, αν στη γειτονιά ας πούμε κάνεις, ξέρεις ή να περιπαίζεις ή να κάνεις κάτι του γείτονα ή στο γήπεδο υπήρχαν φασαρίες, ας πούμε

Σ: όχι, δεν έκανα έτσι

A: Οκ και η προτελευταία ερώτηση. Έτυχε καμιά φορά να έχεις μπλεξίματα με την αστυνομία;

Σ: όχι

## 20241

Σ: Έτυχε καμιά φορά να κάνεις ενάντια στους κανόνες του σχολείου αλλά να πιαστείς; Να σε πιάσουν ας πούμε;

A: Δηλαδή; Δεν κατάλαβα.

Σ: Ναι. Έτυχε να πιαστείς καμιά φορά στο σχολείο επειδή έκανες κάτι ενάντια στους κανόνες του σχολείου; Για παράδειγμα ας πούμε, που λέω και στα άλλα παιδιά. Να αντέγραψες, να φόρεσες διαφορετικά ρούχα όποτι μπορούσες, φύγεις από την τάξη χωρίς άδεια, ή από το σχολείο χωρίς άδεια, ή να αργήσεις να μπεις, να μιλάς στην τάξη, να ακούς μουσική την ώρα της τάξης, να καπνίζεις στο σχολείο. Αυτά.

A: Όχι, απλώς μόνο με το χρώμα της φανέλας. Όχι το χρώμα, Απλώς, στο σχολείο λένε να μη φοράμε σήματα, απλώς να μη γράφει adidas/ nike έτσι, και είπαν μας εμείς οι δευτερείο μπορούμε να φορούμε φανέλες, φορώ όμως που να γράφει μάρκες. Μόνο αυτό έκανα

Σ: Έτυχε όμως καμιά να σε πιάσουν για αυτό το πράγμα;

A: Όχι

Σ: Άρα στο σχολείο δεν έτυχε να έχεις κάποιες συνέπειες;

A: Δηλαδή;

Σ: Δηλαδή να φας μια τιμωρία αποβολή, ή να πας στο γραφείο του διευθυντή, του υποδιευθυντή, να σου κάνουν παρατήρηση ή να στείλουν επιστολή στους γονείς σου;

A: Όχι, το μόνο που έστειλαν επιστολή στους γονείς μου ήταν για τις απουσίες μου, που το γνωρίζαν, που πηγαίνω στο γιατρό, με το πρόβλημα υγείας μου. Μόνο αυτό.

Σ: Οκ. Εμ, άρα δεν ήταν κάτι το οποίο .. Άρα ως τώρα για να καταλάβω δεν έτυχε να γίνει κάτι ώστε να νιώσεις ότι έφας τιμωρία στο σχολείο

A: Όχι

Σ: Οκ. Ωραία.

[άλλες ερωτήσεις]

Σ: Ανάφερεις ότι θα έκανες καμιά πελλάρα έξω μαζί με τους φίλους σου. Αυτό τυγχάνει να είναι κάτι το οποίο σε έβαλε σε μελάδες.

A: Όχι απλώς γελούμε όταν κάποιος κάνει κάτι σε κάποιον άλλο. Απλώς όχι να σπάσουμε κάτι, ή να κοροιδέσουμε κάποιον άλλο, που δεν τον ξέρουμε.

Σ: Οκ. Ωραία. Έτυχε καμιά φορά να έχεις μπλεξίματα με την αστυνομία;

A: Όχι (γέλιο).

Σ: Γενικά στη ζωή σου έτυχε να κάνεις κάτι είτε στο σχολείο είτε στο σπίτι είτε στην κοινωνία, αλλά να μην τιμωρηθείς. Δηλαδή έκανες κάτι ενάντια στους κανόνες, να έκανες καμιά πελλάρα, αλλά να μην τιμωρηθείς.

A: Ε όχι. Τη μόνη πελλάρα που έκανα στο σχολείο είναι ότι [γέλιο] επέταξα την κασετίνα μου μέσα στον κάλαθο καταλάθος, και μου έκανε παρατήρηση, νόμισε ότι δεν ήταν δική

μου, νόμισε ότι ήταν κάποιου άλλου, του είπα ότι ήταν δική μου και έτσι δεν έφαγα αποβολή. Ήταν απλά μια παρεξήγηση.

Maria Zoe Hadjicharalambous

## Appendix F

## Thematic analysis for School violations

Words from transcripts	Theme 1	Theme 2	Final Theme
σκασιαρχείο	Αδικαιολόγητες απουσίες		1. Συμπεριφορές εναντίον της φοίτησης/ Nonattendance Behaviours
έμεινα έξω από την τάξη			
έφυγα από το σχολείο			
έφυγα από την τάξη			
άργησε στην τάξη			
αντιγραφή από το τετράδιο	Αντιγραφή		2. Συμπεριφορές παραποίησης σχολικών εγγράφων/ Behaviours falsification of school's documents
έκανα σκονάκι			
αντιγραφή από άλλους			
αντάλλαξα γραπτό			
αντιγραφή άσκησης στο διάλειμμα			
αντιγραφή			
βοήθεια σε αντιγραφή			
φόρεσα φόρμα	Εξωσχολικά ρούχα	1. Συμπεριφορές ενάντια στη φοίτηση, εμφάνιση, γενική συμπεριφορά/ Behaviours against attendance, appearance, general behavior	3. Συμπεριφορές μη ευπρεπής εμφάνισης - ρούχα/ Behaviours of not seemly apparel clothes
εξωσχολικά ρούχα			
άλλα ρούχα σχολείου			
αζύριστος	Μη επιτρεπτή περιποίηση		4. Συμπεριφορές μη ευπρεπής εμφάνισης - σώμα/ Behaviours of not seemly apparel body/hair
νύχια			
μαλλί μεγάλο			
φοράω σκουλαρίκια			
φασαρία στην τάξη	Αδιαφορία προς το μάθημα		5. Συμπεριφορές παρεμπόδισης ομαλής διεξαγωγής μαθήματος/ Behaviours inhibiting smooth course conducted
πελλάρες στην τάξη			
ομιλία στην τάξη			
θόρυβο στην τάξη			
ομιλία με διπλανό			
άλλα μαθήματα εν ώρα μαθήματος			
κινητό στο θρανίο	Μη επιτρεπτή συμπεριφορά		6. Συμπεριφορές ενάντια στους κανόνες για χρήση κινητών τηλεφώνων/ Behaviours against rules on cell phones
χρησιμοποιούσα τα headphones			
μηνύματα στο κινητό			
μουσική στο μάθημα			
μίλησα στο τηλέφωνο με τη μητέρα μου ενώ δεν έπρεπε			

κάπνισμα	Κάπνισμα	2. Κάπνισμα/ Smoking	7. Κάπνισμα/ Smoking	
έσπασα νιπτήρα	Σπάσιμο αντικειμένων	3. Αδικήματα κατά περιουσίας/ Offenses against property	8. Κακόβουλη ζημιά περιουσίας/ Malicious damage to property	
έσπασα θρανίο				
σπάσιμο αντικειμένων				
χτύπησα το συναγερμό	Καταστροφή περιουσίας			
έριξα πέτρα στο γραφείο του βοηθού				
γράψιμο στους τοίχους	Γράψιμο σε ξένη περιουσία			9. Αναγραφή συνθημάτων/ Graphite
γράψιμο στο θρανίο				
κάψιμο κάτι στο σχολείο	Φωτιά			10. Εμπρησμός/ Arson
κλέψαμε πράγματα από το σχολείο	Κλεψιά			11. Κλοπή/ Theft
φούσκες με νερό	Χρήση αντικειμένων που μπορούν να προκαλέσουν σωματική βλάβη		4. Κατοχή και μεταφορά επικίνδυνων αντικειμένων/ Possession of dangerous items	12. Κατοχή και μεταφορά επικίνδυνων αντικειμένων/ Possession of dangerous items
κροτίδα				
προβλήματα με καθηγητή	Προβλήματα επικοινωνίας	5. Αδικήματα/ Offenses	13. Υβριστική συμπεριφορά/ λεκτική βία/ Verbal abuse	
αντιμίλησα στον καθηγητή				
φωνές σε καθηγήτρια				
τσακωμοί	Σωματική βία			14. Σωματική βία/ Physical abuse
χτύπησα συμμαθητή μου				

## Appendix G

## Thematic Analysis for Society's violations

Words from transcript	Theme 1	Final Theme	
πιάσω κάτι από κατάστημα χωρίς να πληρώσω	1. Κλοπή/ theft	1. Κλοπή/ Theft	
κλεψιές			
πιάνω πέννες και τις δίνω πίσω			
τσίχλες από κατάστημα			
έκλεψα μοτόρα			
μοτόρες χωρίς άδεια	2. Παράβαση νομικού δικαίου/ Violation of laws	2. Συμπεριφορές κατά του νόμου οδικής ασφάλειας/ Behaviours against the law of safety driving	
αυτοκίνητο χωρίς άδεια			
οδήγηση παράνομα			
μοτόρα στη γειτονιά			
πιάνω το αυτοκίνητο αυτοκίνητο γυρούς			
κλαμπ		3. Συμπεριφορές κατά του νόμου για κέντρα αναψυχής/ Behaviours against the law of clubbing	
Χρήση χόρτου		4. Συμπεριφορά κατά του νόμου περί ναρκωτικών και εξαρτησιογόνων ουσιών/ Behaviours against the law of drugs	
σπάσιμο γυαλιού		3. Καταστροφή ιδιοκτησίας/ Damage to property	5. Κακόβουλη ζημιά περιουσίας/ Malicious damage to property
σπάσιμο αντικειμένων			
κάναμε κάτι σε ένα αυτοκίνητο			
ανάναμε φωτιές	6. Εμπρησμός/ Arson		
βάζω φωτιά			
σανίδα σε τόπο που δεν επιτρέπεται	7. Καταπάτηση περιουσίας/ Property violation		
γράψιμο με σπρει	8. Αναγραφή συνθημάτων/ Graphite		

πειράζαμε στην λαμπρατζιά	4. Επιθετικότητα/ Aggressiveness	9. Προκλητική συμπεριφορά/ Oppositional or defiant behaviours	
τρομάξαμε κάποιους τη μέρα του Χαλογουιν			
φάρσα			
τσακώθηκα με μια ηλικιωμένη			
τσακωμοί με γείτονα για το σκύλο			
προβλήματα με τους γείτονες			
μαλακίες με παρέα			
καμιά μαλακία			
καμιά τρέλα με φίλους			
φορούσα κοκκούλα σε αγώνα			
καβγά		10. Σωματική βία/ Physical abuse	
χτύπησα κάποιον λαμπρατζιά τσακώθηκα με αστυνομικούς			
καβγάς σε αγώνα			
έριξα πέτρες στο γήπεδο		11. Κατοχή και μεταφορά επικίνδυνων αντικειμένων/ Possession of dangerous items	
αναπήρα στο γήπεδο			
φωτοβολίδα στο γήπεδο			
εβάλαμε τσάκρες			
κροτίδες			
πομπάρτες			
έριξα αυγά			