UNIVERSITY OF CALIFORNIA

Santa Barbara

Pathways between Trauma, Schizoid Personality Traits, and Substance Problems Among Males on Probation

A Dissertation submitted in partial satisfaction of the requirements for the degree Doctor of Philosophy in Counseling, Clinical, and School Psychology

by

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September 2015

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June 2014

ACKNOWLEDGEMENTS

This work could not have come to fruition without the help, support, and influence of a number of great people I am fortunate to have in my life. I am grateful to my entire Ph.D. committee because they showed that they believed in me and my approach. Without a doubt, my advisor, Dr. Merith Cosden, was instrumental in my life as a graduate student. Her belief in me and her unwavering support allowed me to find my path as a researcher. She allowed me to hold on to my Eurocentric passion for psychoanalytic theory, but challenged me at the same time to look beyond and embrace a diversity of approaches, from which I will draw from now on. In Dr. Steve Smith I found a professor who went beyond textbooks. With his teaching style, which I can best describe as experiential, he made us students engage not only with our thoughts but with our hearts as well. His passion for the field was inspirational to me and will stay with me throughout my life. I thank Dr. Melissa Morgan-Consoli for her authenticity as a teacher and psychologist who always reminded me to think of participants as real people. I share her passion for the study of culture and diversity, and I am thankful for her guidance and cultural sensitivity. I am grateful for Dr. Jill Sharkey and her involvement in my growth as a student researcher. It was clear to me that she cared about the individuals we were studying. Her comments and ideas always challenged me to rethink my first approach and to consider the material in its complexity. Dr. Heidi Zetzer with whom I had the pleasure of working together in the Hosford clinic is a person of inspiration to me. Her grace, her wisdom, her presence, and her outlook on life resonate with me and I found great comfort in knowing that there is someone like Dr. Zetzer in this world. I would like to thank my husband, Jock, who walked beside me on this path through graduate school. It was, to be honest, often stressful and exhausting for me. I studied hard and without Jock's humor and love for me as well as his patience, I may have lost a sense of lightness in life. My parents, Heidi and Wolfgang, who still mourn the fact that their only daughter continues to live a continent away gave me their support and encouraging words when I was struggling. I am so grateful that they see the happiness and wonders I find traveling the world, and that they let the joys outweigh the sorrows of being apart for so long. I want to thank my friends who probably don't even know the extent of how much they mean to me, and how much their presence makes life worthwhile. They helped me laugh and rejuvenate when I needed it. I am grateful for those who let me go and explore the world, even though it meant separation from them. I am a wanderer, and like Rilke said, the search for me is not over.

Nachtgedanken

Weltenweiter Wandrer,
walle fort in Ruh.....
Also kennt kein andrer
Menschenleid wie - du.

Wenn mit lichtem Leuchten
du beginnst den Lauf.
schlägt der Schmerz die feuchten
Augen zu dir auf.

Drinnen liegt - als riefen
sie dir zu: versteh ! -
tief in ihren Tiefen
eine Welt von Weh.....

Tausend Tränen reden
ewig ungestillt, - -
und in einer jeden
spiegelt sich dein Bild.

Rainer Maria Rilke, Early Poem, 1894

CURRICULUM VITAE OF ANA LAURA THOMAT

May 2014

EDUCATION

Ph.D. Candidate: Clinical Psychology Sept. 2010-Present
University of California Santa Barbara (UCSB) *Advisor:* Merith Cosden, Ph.D.
Department of Counseling, Clinical, and School Psychology (CCSP)
Cumulative GPA: 4.0

Master: Global Studies Oct. 2006-Aug. 2008
University of Leipzig, Germany
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University of California Santa Barbara (exchange)

Bachelor of Science: Psychology Mar. 2002-Mar. 2006
University of New South Wales, Sydney, Australia

Bachelor of Commerce: International Business Mar. 2002-Mar. 2006
University of New South Wales, Sydney, Australia

LANGUAGES

English (fluent), German (mother tongue), French (fluent), Spanish (fluent), Italian (moderate), Portuguese (moderate), Korean (beginner)

CLINICAL EXPERIENCE

Clinic Coordinator
Hosford University Clinic Jul. 2013-Jun. 2014
UCSB *Supervisor*: Heidi Zetzer, Ph.D.
Implemented crisis management; assisted and supervised first-year student clinicians conducting intakes; conducted phone intakes with prospective clients; collaborated with faculty and clinic director to make changes to clinic policy where necessary; led weekly staff meeting to determine case assignments; implemented clinic policy and made changes to procedures in order to reflect the highest ethical and professional standards.

Practicum
New Beginnings Counseling Center Sept. 2012-Sept. 2013
Santa Barbara, CA *Supervisors*: Paul Guido, Ph.D., Jean Palmer-Daley, Ph.D.
Conducted weekly psychotherapy with adult and teenage patients with severe mental health disorders, including axis II; conducted cognitive assessments and psychodiagnostic interviews; provided individual, couple, and group therapy for a diverse population of English and Spanish speakers; led three different groups at a residential facility for formerly homeless individuals with severe mental health disorders, including schizophrenia:

- CBT group aimed at increasing emotion regulation skills

- Process group aimed at exploring intrapersonal conflicts and interpersonal difficulties
- Grief counseling group to support group members dealing with loss and identity problems

Therapist
Hosford Clinic Jun. 2011-Jun. 2012
UCSB *Supervisors:* Steven Smith, Ph.D., Merith Cosden, Ph.D.
Conducted individual, couple, and family therapy with community and university clients; used psychodynamic, family systems, and cognitive behavioral psychotherapy interventions; conducted clinical interviews and psychodiagnostic assessments.

Assessment Clinician
Psychology Assessment Center Jan. 2012-Oct. 2013
UCSB *Supervisor:* Erik Lande, Ph.D.
Conducted integrated neuropsychological and personality assessments with child and adult clients presenting with a variety of clinical concerns, such as traumatic brain injury, mood disorders, attention deficits, and learning disorders.

Consultant
Koegel Autism Center, UCSB Jan. 2013-Sept. 2013
UCSB *Supervisor*: Whitney Smith, Ph.D.
Counseled families on implementing Pivotal Response Treatment (PRT) techniques; developed treatment plans; conducted face-to-face intervention with teenagers suffering from autism; worked with individuals and families.

Program supervisor
Koegel Autism Center Jan. 2009-Dec. 2012
UCSB *Supervisor*: Rosy Fredeen, Ph.D.
Implemented PRT to clients (ages 4-13) suffering from autism and their families; conducted weekly parent trainings based on PRT.

RESEARCH EXPERIENCE

Dissertation
UCSB Defended in June 2014
Title: *Pathways between Trauma, Schizoid Personality Traits, and Substance Problems Among Males on Probation*
Dissertation committee: Merith Cosden, Ph.D., Steven Smith, Ph.D., Melissa Morgan-Consoli, Ph.D., Jill Sharkey, Ph.D.
The dissertation study explored pathways between trauma, personality, and antisocial behaviors. Specifically, a latent variable modeling approach analyzed the association between trauma, schizoid personality traits, social support, and substance problems in a sample of 1,029 juvenile males with an offending history.

Graduate Student Researcher (GSR)
UCSB – Dr. Merith Cosden's Laboratory Apr. 2009-Jul. 2014

- Data manager and lead GSR of a federally funded SAMHSA grant project (2010-2013; SAMHSA grant ID#: TI022513) investigating mental health outcomes of wraparound treatment services for delinquent adolescents re-entering the community; coordinated and facilitated survey-based data collection across multiple agencies over three years; trained mental health treatment providers on implementing standardized biopsychosocial assessments; collaborated with juvenile justice and mental health personnel; analyzed complex data sets and produced biannual reports on specified outcomes; conducted clinical interviews on treatment satisfaction with patients in addiction recovery; trained research assistants on data entry
- Research on resilience, psychodynamic theory, feminist ethics, and self-conscious emotions for the qualifying exams
- Research on strengths and risks of juvenile male offenders presented at six conferences; currently working on two journal publications related to resilience factors of rehabilitation, and intragroup differences among male offenders and their motivations to quit illegal substances

Research Assistant
Department of International Business Aug. 2005-Feb. 2006
University of New South Wales, Sydney, Australia *Advisor*: Prem Ramburuth, Ph.D.
Researched social psychological theories for group behavior analysis in a cross-cultural setting.

Intern
Department of Work and Organizational Psychology Jun. 2006-Jul. 2006
University of Konstanz, Germany *Advisor*: Sabine Sonnentag, Ph.D.
Researched psychological constructs related to work productivity; developed and implemented a Work-Life Balance workshop.

TEACHING EXPERIENCE

Guest Lecturer
Dept. of Counseling, Clinical, and School Psychology May 2014
UCSB
Lectured on short-term psychodynamic therapy.

Guest Lecturer
Dept. of Counseling, Clinical, and School Psychology Feb. 2014
UCSB
Presented on the role of shame in psychotherapy; facilitated class discussions; provided supervision on clinical case presentations.

Teaching Assistant
Dept. of Counseling, Clinical, and School Psychology Sept. 2012-Dec. 2012
UCSB *Instructor*: Tania Israel, Ph.D.

Instructed two undergraduate sections (approx. 40 students) in applied psychology weekly on principles and theories of psychotherapy; graded exams and assignments; managed waiting list and course crashers; generated quiz and exam questions; participated in weekly meetings with the course instructor.

PRESENTATIONS

Thomat, A. L., Koch, L., Cosden, M. A., & Sharkey, J. D. (2013, July). *Strengths as predictors of antisocial and prosocial outcomes in delinquent youth*. Poster session presented at the annual meeting of the American Psychological Association, O'ahu, HI.

Thomat, A. L., Cosden, M. A., & Sharkey, J. D. (2013, July). *An exploratory study of moral emotions among juvenile male offenders*. Poster session presented at the annual meeting of the American Psychological Association, O'ahu, HI.

Thomat, A. L., Cosden, M. A., & Sharkey, J. D. (2012, August). *Protective factors for substance abuse among delinquent adolescents*. Poster session presented at the annual meeting of the American Psychological Association, Orlando, FL.

Thomat, A. L., Cosden, M. A., & Sharkey, J. D. (2012, May). *Delinquent adolescent males: assessing protective and risk factors' associations with outcomes*. Poster session presented at the annual meeting of the Association for Psychological Science, Chicago, IL.

Thomat, A. L. (2012, November). *What about strengths as a pre-existing condition among male offenders? Predicting future antisocial and prosocial outcomes*. Paper presented at the Annual Counseling, Clinical, and School Psychology Research Festival, Santa Barbara, CA.

Thomat, A. L., Cosden, M. A., & Sharkey, J. D. (2012, April). Strength-based assessment for youth in a juvenile justice reentry program: implications for treatment planning. In M. A. Cosden (Chair), *Juvenile Justice Panel: Assessment and Evaluation*. Symposium conducted at the Joint Meeting on Adolescent Treatment Effectiveness, Washington, D.C.

Thomat, A. L., Cosden, M. A., & Sharkey, J. D. (2012, April). *Protective factors for substance abuse among delinquent male adolescents*. Poster session presented at the annual meeting of the California Psychological Association, Monterey, CA.

PROFESSIONAL REPORTS

Cosden, M. A., Sharkey, J. D., **Thomat, A. L., Koch, L.**, & Rodriguez, R. (2013). *Bridges to Recovery: helping incarcerated males re-enter the community*. Washington, D.C.: Substance Abuse and Mental Health Services Administration, Center for Substance Abuse Treatment.

Cosden, M. A., Sullivan, K., Larsen, J., Donahue, M., & **Thomat, A. L.** (2011). *Evaluation of the Santa Barbara County Substance Abuse Treatment Courts 2001-2011*. Washington, D.C.: Substance Abuse and Mental Health Services Administration, Center for Substance Abuse Treatment.

PUBLICATIONS IN PREPARATION

Thomat, A. L., Cosden, M. A., & Sharkey, J. D. (2014). *The relations of internal and external strengths to empathy in Latino youths reentering the community post incarceration.* Manuscript in preparation.

Thomat, A. L., Cosden, M. A., & Sharkey, J. D. (2014). *Motivation subtypes for quitting drugs among juvenile male offenders: A latent class analysis.* Manuscript in preparation.

TRAININGS

Group facilitator
South Coast Task Force on Youth Gangs Jul. 2012
UCSB *Supervisor:* Jill Sharkey, Ph.D.
Trained a group of executive council members on how to implement a Strengths-Weaknesses-Opportunities-Threats analysis in order to generate critical items for the mission of the task force to reduce local gang violence.

Training Facilitator and Speaker
UCSB Sept. 2011-Sept. 2012
Developed and implemented four annual trainings for agencies in Santa Barbara County on the Addiction Severity Index (ASI); trained mental health professional on how to conduct an ASI interview and how to score participants' responses in order to ensure fidelity.

AWARDS AND SCHOLARSHIPS

- Susan A. Neufeldt Award for excellence in clinical supervision (2014) presented by the Hosford Counseling & Psychological Services Clinic at UCSB
- Doctoral Travel Grant (2013) awarded by the Academic Senate of UCSB for presenting two studies at APA
- Block Grant awarded by the Department of CCSP for 2010-2011 and for 2011-2012
- Hosford Fellowship Research Award (2012) awarded by the Hosford Research Committee to study self-conscious emotions among incarcerated males
- Travel Grant (2012) awarded by the Department of CCSP for presenting a study at APA
- Ray E. Hosford award (2012) awarded by the Department of CCSP
- Travel Stipend for study abroad at UCSB (2007/08) awarded by the University of Leipzig
- Scholarship (2006) from the University of Leipzig, Germany

PROFESSIONAL AFFILIATIONS

- Member of the *American Psychological Association* since January 2010
    - Division 39, APAGS
- Member of the *Santa Barbara County Psychological Association* since August 2013
    - Student affiliate

ABSTRACT

Pathways between Trauma, Schizoid Personality Traits, and Substance Problems Among Juvenile Males on Probation

by

Ana Laura Thomat

Mood and substance use disorders are prevalent among incarcerated youths. Much research has focused on externalizing symptoms of juvenile males with a criminal record, and little is known about introverted personality types. Schizoid personality traits lie on the introversion personality dimension and have specific characteristics that represent potentially maladaptive intra- and interpersonal styles. A latent variable approach explored pathways between childhood trauma, schizoid personality traits, and substance problems among 1,029 juvenile males who committed an offense. Trauma, schizoid personality traits, and social support were specified as predictors, and substance problems represented the outcome of a structural equation model. The model tested whether or not social support was a mediator for the association between schizoid personality and substance problems. Moreover, I was interested in the association between trauma, schizoid personality, and substance problems. I found that childhood trauma was significantly and positively related to schizoid personality traits, and that it had an indirect, positive effect on substance problems. Specifically, schizoid personality mediated the relationship between trauma and substance problems. Trauma appeared to increase substance problems through the pathway it shared with schizoid personality traits, yet not through the pathway of social support. Results show that schizoid personality had a positive, significant association with substance problems, while social

support was not significantly related to the outcome. There was no evidence that social support mediated the relation of schizoid personality and substance problems. Hence, a lack of social support did not explain why individuals higher on schizoid traits used alcohol or drugs in problematic ways. The study calls for intervention models that incorporate personality assessments for enhancing services to fit with interpersonal styles of clients. Screening for substance use behaviors is not sufficient when treating youths who committed crimes; assessing trauma history and personality style are important elements for treatment planning. Social support as a strength may not buffer the effects of trauma and schizoid personality traits, so that alternative or additional strengths should be assessed and incorporated into the treatment of adolescents who struggle with antisocial behaviors such as criminal activity and substance use.

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Introduction

Juvenile crime challenges societal beliefs about children and their innocence. Juveniles who engage in criminal activity tend to disturb not only social order but existing concepts of how to address deviance among the very young and vulnerable, that is, among children. Policy makers struggle with how best to address this issue. Over the past decades criminal justice has moved into an interdisciplinary field that acknowledges the roles of psychology, sociology, economy, culture, and politics in the treatment of juveniles who commit crimes.

This study addresses the complex phenomenon of youth offending by enhancing the understanding of different intra- and extrapsychic variables that are associated with such behaviors. By helping develop a more intimate and nuanced understanding of youths who commit illegal acts, policymakers can be supported in making informed decisions and develop efficient interventions. The recidivism rate of juveniles as reported by the Division of Juvenile Justice was at 81% in terms of new arrests after release for the fiscal year of 2004-2005 in the state of California (California Department of Corrections and Rehabilitation, 2010). Clearly, the processes and mechanisms of juvenile offending are not entirely understood and therefore not sufficiently addressed with current rehabilitation efforts. While this study is not aimed at replacing current, evidence-based treatment efforts, it strives to add to those treatments by contributing research on understudied personality types and traumagenic factors correlated with antisocial behavior.

Trauma and Personality Factors of Delinquency

Youths in the juvenile justice system have high rates of victimization, emotional, and behavioral problems compared to youths who are not incarcerated (National Child Traumatic Stress Network, 2004). Abram et al. (2004) found that approximately one-third of juvenile detainees were suffering from posttraumatic stress disorder. Past and ongoing traumatic experiences such as physical, sexual, and emotional abuse among individuals who abuse substances have been associated with avoidant, dependent, impulsive, sadistic, paranoid, schizoid, borderline, and narcissistic personality traits (Bernstein, Stein, & Handelsman, 1998). Frequently reported high-risk personality characteristics for offending are impulsivity, sensation-seeking, irritability, and low empathy (Guerra, Williams, Tolan, & Modecki, 2008). The U.S. Department of Health and Human Services (2008) reports that adolescents who have been victimized or exposed to violence are more likely to aggress against others. Given the high rate of trauma among the offender population, more research is needed to explore the various pathways on which it operates (Abram et al., 2004). For example, more research is needed to explore how traumatic experiences influence substance problems, and whether there are developmental trajectories that increase the risk for problematic substance use. Similarly, research is needed to investigate how trauma affects personality development.

Traumatic experiences have been associated with the development of personality disorders (PDs) (Johnson et al., 2001). A study by Johnson et al. (2001) on verbal abuse and PD found that verbal abuse was related to increased risks for developing borderline, narcissistic, obsessive-compulsive, and paranoid PDs during adolescence and early adulthood. Remarkably, verbal abuse was also associated with elevated schizoid and

schizotypal PD symptom levels during adolescence and early adulthood (Johnson et al., 2001).

Before studying the effects of trauma on personality traits it is critical to define what personality is. Personality traits are defined as "enduring patterns of perceiving, relating to, and thinking about the environment and oneself that are exhibited in a wide range of social and personal contexts" (5th ed.; DSM-V; American Psychiatric Association, 2013, p. 647). Therefore, personality carries intra- and extrapsychic qualities. For this study on adolescents personality is conceptualized as a fluid, dimensional construct consisting of propensities that undergo developmental changes and that are affected by stressors in the environment such as poverty and poor family relations (Moffitt, Caspi, Harrington, & Milne, 2002; Trentacosta, Hyde, Shaw, & Cheong, 2009). Personality emerges over time as a result of a combination of early caregiver relationships, biological manifestations, and social interactions. There are different approaches to studying personality that include categorical and dimensional ones. The *DSM-IV-TR* (4th ed.; American Psychiatric Association, 2000) relies on categorical classifications of personality that according to critics creates the illusion of an exclusive division between related personality constructs (Benjamin, 1996). In clinical reality patients present with many co-occurring and overlapping symptoms, which is why a dimensional approach is favored in this study. The five-factor model is a widely recognized dimensional model capturing five central personality dimensions that have been corroborated across many cultures (McCrae & Costa, 1997). Because this study is concerned with personality traits and not disorders, the five-factor model is particularly suitable; it provides a dimensional model of normal personality traits that are grouped into neuroticism, extraversion, openness to experience, agreeableness, and conscientiousness (Costa & McCrae, 1992). The introversion

dimension includes individuals with schizoid traits; it lies at the other end of the extraversion dimension that encompasses antisocial personality types. Individuals with schizoid traits prefer introspection and solitary activities (Guntrip, 1968). Importantly, the study of personality traits can include individuals diagnosed with a personality disorder but is not constrained to diagnostics. Also, personality is not confined to intrapsychic processes but is characterized by interpersonal patterns of behaviors, commonly used defense mechanisms, and cognitive schemas for thinking about self and others. Therefore, when taking this perspective personality can be influenced by external factors like trauma and social support, for example.

What is referred to as schizoid personality style appertains to a selection of personality presentations characteristic of cluster A personality organizations (4th ed., text rev.; DSM-IV-TR; American Psychiatric Association, 2000). They are based on descriptions and characterizations of schizoid personality as found in the Diagnostic and Statistical Manual of Mental Disorders (4th ed., text rev.; DSM-IV-TR; American Psychiatric Association, 2000) and relevant psychiatric case formulations (Akhtar, 1987; Fairbairn, 1952; Guntrip, 1968; Mc Williams, 2011; Silverstein, 2007). Schizoid personality describes individuals who tend to be introverted, solitary, and who engage in tangential thinking. Individuals high on schizoid traits tend to use intellectualization as a defense mechanism and display an indifference to external affairs preferring a solitary world of imagination (McWilliams, 2011). In other words, individuals with such personality tend to revert to reasoning in order to avoid discomfort elicited by emotional distress. And, they prefer solitude over their social environment much like an introvert would. They tend to manage

emotions by avoidance, withdrawal, distrust, or escaping. Those traits can be conceptualized as defenses for coping with high levels of internal distress.

Antisocial personality dimensions have been more frequently studied in relation to youths who have an offending history. There is a dearth of research on schizoid personality types and substance problems. And that despite the fact that research suggests that internalizing disorders are associated with marijuana abuse whereas externalizing disorders relate to alcohol abuse (Flory, Lynam, Milich, Leukefeld, & Clayton, 2002). Marijuana abuse or dependence is a commonly reported, co-morbid issue of juveniles and it has been considered to be associated with more severe illicit drug use (Dennis et al., 2004; Hall & Lynskey, 2005). Hence, it is important to study personality types that are typically not on the radar of treatment providers' screening procedures because of their more introverted characteristics that are less disruptive compared to aggressive and extroverted types.

From a psychoanalytic standpoint, child abuse leads to the fragmentation of the child's sense of self. Parents have a critical role for the development of the self because they act as mirror of the child's inner sensations and experiences, and they contribute to the child's sense of inner coherence (Fonagy, Gergely, Jurist, & Target, 2002; Löffler-Stastka, Szerencsics, & Blüml, 2009). The child withdraws from others as a defense from unsatisfying relationships with caregivers who were overbearing or who communicated an emotional ingenuity that significantly disrupted the integration of the *I* and the *It*, i.e., the experience of the self in its subjectivity and as an object in the outside world. Those early disruptions and deficient early child-caregiver relationships can lead to traumatic experiences that will be referred to as trauma throughout the study. Children who were abused often develop emotional dysregulation, lack of ego functioning, and primitive defense structures

(Löffler-Stastka et al., 2009). The high prevalence of mental health symptoms such as anxiety, hostility, dissociation, narcissism, and depression among juvenile delinquents is considered symptomatic of high trauma levels. Similarly, personality characteristics such as impulsiveness, manipulative behavior, withdrawal and aloofness can be considered symptoms of underlying traumatic experiences. Interest in the link between personality and delinquency is not novel. For example, Glueck and Glueck (1950) found several personality traits such as narcissism, impulsiveness, hostility as well as feelings of not being recognized, to be linked to delinquency.

Trauma, Substance Abuse, and Social Support

The trauma literature has provided research on the pervasiveness of the co-occurrence of trauma and substance abuse. Drugs by altering the state of consciousness deliver a temporary relief from the fragmenting and painful experiences of trauma (Najavits, Weiss, & Shaw, 1997). Substance abuse has been frequently cited as a precursor to criminal activity, so that by targeting substance problems one is likely to impact criminal behavior as well (Hawkins, Catalano, & Miller, 1992; Welte, Barnes, Hoffman, Wieczorek, & Zhang, 2005). Substance problems unlike substance use disorders delineate problems in relationships, difficulties at school, and legal problems in relation to drug use (Wills, Sandy, & Yaeger, 2002). Yet, substance problems do not necessarily imply an excessive use of substances; rather, they denote associated psychological problems of using, which is why substance problems rather than substance use disorders were included in the analysis.

Some researchers report that the prevalence of mood and substance use disorders among incarcerated youths is two to three times higher compared to the general public (Grisso, 2005). Although adolescents in general are at risk for substance problems due to the

developmental phase of testing boundaries, seeking greater autonomy, and risk-taking, there is strong evidence to suggest that youths who were abused report more substance abuse than those who were not (Daud, Klinteberg, & Rydelius, 2008; National Child Traumatic Stress Network, 2004). Traumatic experiences lead to unpleasant and interfering psychological and physical sensations such as intrusions, arousal, and hypervigilance that often are "treated" by the victim through the use of substances (Dass-Brailsford & Myrick, 2010). In other words, substance problems are merely symptoms of deeper-rooted issues. This study conceptualizes the effects of trauma on the child as profound disturbance of the inner structure of the developing self whereby trauma is a "breaking of the continuity of the line of the individual's existence" (Winnicott, 1986, p. 22).

Trauma, personality development, and substance problems appear to share certain pathways, in that early traumatic experiences are associated with personality types that are more prone to abuse illicit drugs due to the trauma's impact on affect regulation and self-cohesion (Grella, Stein, & Greenwell, 2005). When applying a psychoanalytic lens, corrective emotional experiences can occur through adequate reflection of internal sensations by others than the parents, for example, by social peers or romantic partners. Social support has been found to foster self-esteem and coping contributing to an individual's resilience against adversity (Markstrom & Marshall, 2007). Undoubtedly, the peer group is central in adolescents' lives since it is a platform for identity formation and for instilling a sense of belonging (Erikson, 1968). Low-risk behaviors have been linked to perceived social support by peers, family, and others among Latino/a fifth and sixth graders (Morrison, Robertson, Laurie, & Kelly, 2002). A longitudinal study by Kathib, Bhui, and Stansfeld (2013) found that low social support predicted emotional symptoms related to psychological distress for

British students who were assessed between the ages of 11 and 16 years. However, social support not only has an important role for the adolescent's development but also for mental health treatment as it is positively related to the therapeutic alliance (Garner, Godley, & Funk, 2008). A study by Garner et al. (2008) found that higher social support was associated with better problem recognition, more identified reasons for quitting drugs, and higher ratings of the therapeutic alliance (Garner et al., 2008). Also, research on social support recognizes that supportive networks fulfill different needs; for example, emotional, instrumental, and informational needs (Fleuriet, 2009). Emotional support is defined as love and compassion, instrumental support as concrete help with needs, and informational support refers to guidance and advice (Harley & Eskenazi, 2006). In conjunction with the different needs, there are distinct sources of social support to consider. It appears that a majority of research on social support focuses on one or two sources; in the case of adolescents and children those tend to be familial systems and friends. Therefore, considering the role of a variety of distinct sources for social support including teachers, counselors, family, and friends, is indicated in order to be able to address the different needs they may fulfill.

Risk, Resilience, and Juvenile Delinquency

Juvenile delinquency has been studied by a variety of approaches, a recent one being through a positive, developmental lens of resilience. Resilience is a concept that is often misunderstood to represent invulnerability or resistance to negative influences. Instead resilience describes a process of strengths or protective factors interrupting a negative trajectory (Morrison et al., 2002). It has become a prevalent conceptual and methodological approach in the medical sciences and humanities alike because it helps ascertain what factors are protective against risks of genetic predispositions for physiological illnesses and

psychological disorders. Even though this study will not take a classic resilience approach, it shares some core concepts with it. First, it takes a variety of risk factors into consideration, such as trauma, maladaptive personality traits, and previous illegal activity. Second, it inserts social support as a potential protective factor against substance problems for youths released from juvenile detention. From a clinical point of view a reduction in substance abuse problems represents a positive outcome because it indicates rehabilitation and lower risk levels for on-going antisocial behaviors. Finally, this study borrows from resilience theory some important tenets, such as the idea of developmentally shaped pathways.

There is an interdisciplinary consensus that, when studying youths with an offending history, researchers should adopt a developmental perspective that addresses newly emerging risk and protective factors along cognitive, affective, and behavioral changes. For example, trauma is regarded a risk factor for emerging maladaptive personality traits (Rogosch & Cicchetti, 2005). Incarceration has proven to be an ineffective treatment method for youths who offended because it insufficiently, if at all, addresses mental health issues, and because it suppresses protective factors' influence (Mauricio et al., 2009). While in detention, social support and self-esteem, for example, are not fostered in ways that would help youths build ego strength and modify their trajectories. Moreover, many drug treatment programs rely heavily on group therapy formats and emphasize the role of social support in recovery. However, group-based modalities may not be effective for individuals with introverted personality traits who experience large group settings as uncomfortable or threatening.

Resilience addresses the phenomenon that not all of the children who were traumatized develop maladaptive personality traits or other negative psychological outcomes such as internalizing problems or deviant behaviors (Werner, 1996). This leads to the

assumption that there must be other factors involved, apart from the traumatic experience, that account for maladjustment. Previous resilience studies have predominantly investigated risk factors for juveniles who commit crimes and identified genetic predispositions, dysfunctional family background, mental illness, psychological distress, emotional dysregulation, and gang involvement to heighten the risk for recidivism (Mauricio et al., 2009). Generally, resilience studies are conducted within an ecological theoretical framework that stresses the influence of interpersonal environment, institutions, and societal structures on development. However, certain psychoanalytic concepts directly apply to a person's resilience as well. For example, ego strength, ego control, and ego resiliency correspond to psychoanalytic tenets of the ego's role in adaptation (Oshri, Rogosch, Burnette, & Cicchetti, 2011). Resilience research on developmental trauma found that children who suffered maltreatment displayed lower ego control and lower ego resiliency (Oshri et al., 2011). Ego control and ego resiliency are concepts developed by Block and Block (2006) whereby the ability to control emotional impulses (ego control), and the ability to adjust emotionality to the context (ego resiliency) are strengths related to personality. Just like the dimensional understanding of personality, ego control and ego resiliency function on a continuum. Ego strength is a personality construct that pertains to a resilience framework. The ability to control emotions and impulses is referred to as ego strengths. Ego strength refers to psychoanalytic theory of the structure of the self and it has been related to self-awareness, psychological maturity, and adaptive personality characteristics (Gfellner & Armstrong, 2012). It is part of the self that is fundamental for organizing experiences and maintaining a cohesive sense of self. The psychoanalytic construct of the ego can be considered a resilience factor because it has an adaptive function in that it enables a person to relate his self to an

outer reality (Fairbairn, 1952). The ego integrates desires and ideals of the self, and it helps direct behavior by being grounded in reality (Saul, 1971). Therefore, ego strength is an internal protective factor against risks of fragmentation of self, dissociation, and regression.

Resilience is assessed by protective factors in an adverse environment to see how they relate to adaptation in a specific domain of functioning (Kia-Keating, Dowdy, Morgan, & Noam, 2011). For example, emotional abuse and dysfunctional attachment styles put children at risk for later substance problems (Flores, 2004). As a result, a child who developed substance problems may struggle academically (educational/work domain), but still report good social support, for example. Strengths or protective factors counter risks, and enhance the possibility for adaptation despite adversity. The challenge is to find out what protective factors work for what specific domain in an adverse context. Importantly, an asset can only be called a protective factor when a risk is present (Kia-Keating et al., 2011). Assets occur in the absence of significant adversity and are called promotive factors because they directly strengthen positive developmental outcomes (Kia-Keating et al., 2011). While vulnerability factors tend to worsen the risk effects on the individual's functioning, protective factors act as buffers that "modify the effects of risk in a positive direction" (Luthar & Cicchetti, 2000, p. 860). The community, family, and the individual's competencies can influence vulnerability and protective factors, and thus act as active agents in the promotion of resilience. Similarly, poverty, family dysfunction, parental psychopathology and substance abuse, and trauma have been linked to negative developmental outcomes for adolescents (Carr & Vandiver, 2001). Hence, resilience as a process can be found internally, i.e., residing within the individual, and externally, i.e., residing outside of the individual.

The study was concerned with both internal and external factors of resilience to evaluate pathways that influence substance problems for male youths on probation. It examined the introverted youth offender type with schizoid tendencies, and explored whether trauma affects problematic substance use behaviors through schizoid personality traits. And, I was interested in studying whether the effect maladaptive personality traits have on substance use behaviors could be mediated by social support. It is important to note that while individuals high on schizoid traits tend to be introverted, not all introverted individuals have schizoid traits. The schizoid personality type is sorely understudied, in particular among juveniles with a criminal history. Existing literature suggests that social support may function as a buffer when examining psychological trauma and delinquent behaviors (Maschi, 2006). Yet, to my knowledge there is currently no published study on whether having friends or teachers to turn to serves a protective function for schizoid personality characteristics. To sum, this study closed the gap in the existing juvenile justice literature by examining the relationships between previous trauma, schizoid personality and substance problems. Since little is known about schizoid personality among substance users this study helped illuminate whether it is a protective or risk factor for substance problems. The study clarified whether the schizoid personality type lowered the risk for substance problems because of its preference for solitary activities minimizing the influence of antisocial peers, or, whether it heightened it due to using drugs to treat inner psychological pain. Especially, since there is theory pointing to schizoid characteristics evolving from trauma history, it appears to be an overlooked personality type that is at elevated risk for drug use as a self-soothing coping mechanism (Fairbairn, 1952; Guntrip, 1968; Slavik, Sperry, & Carlson, 1992). Additionally,

this study set out to confirm the trauma-schizoid personality pathway to add empirical evidence to the trauma literature and psychoanalytic theory.

Purpose

As part of a national government-funded grant project community mental health clinics nationwide administered treatment models to youths post-detention in order to address needs for substance use reduction. There is a wealth of empirical research on antisocial personality types and a dearth of studies on introverted youths. What about those youths who are placed into the juvenile justice system and who do not draw readily attention to themselves because they are quiet and isolate themselves? At this point it is critical to broaden the typologies of personality research of youths who commit crimes and turn our attention to the internalizing type. This study set out to examine schizoid personality types and whether social support served as a protective factor against substance problems the same way it has been shown for impulsive, externalizing character types.

Schizoid traits are at the core of many psychopathologies and they are therefore of central importance to our understanding of how they interact with risks and strengths during a critical, developmental period of life (Seinfeld, 1991). In order to broaden the conceptualization of youths with a criminal history and gain an understanding of how schizoid personality types relate to substance problems, this study implemented a latent variable approach that was able to address constructs of personality, trauma, substance problems, and social support and their respective interrelations. One of the goals of this study was to build a pathway model for juveniles with a criminal record taking a resilience model approach. Previous psychological trauma was considered a static risk, and schizoid personality a dynamic risk factor because personality traits are still evolving during

adolescence (Cicchetti & Rogosch, 2002). Social support was considered an asset because it has positive effects across domains, even in the absence of risk factors (Shekhtmeyster, Sharkey, & You, 2011). It is similarly conceptualized as a dynamic factor because social support sources tend to change over the course of time and developmental stage.

Even though mental health problems and substance use disorder often occur co-morbidly, there is evidence to suggest that the former as a result from early traumatic experiences precedes the latter (Libby, Orton, Stover, & Riggs, 2005). And, granting substance use disorders (i.e., dependence or abuse) are a common research focus for studying the offender population, there is value in attending to problematic substance use behaviors that are subclinical or do not meet diagnostic criteria. Early detection of interpersonal problems or academic difficulties related to but independent of frequency of substance use may be a better indicator for evaluating treatment necessity and risk than the typical criteria of high frequency and severity (number of symptoms) of drugs used (Wills et al., 2002). This is because the latter implies a longer-term use history that places the individual at high-risk when beginning treatment instead of intervening when risk levels are lower (e.g., shorter drug use history and infrequent use) and treatment prognosis is better.

The proposed model's pathways led from psychological trauma to personality and substance problems. Did individuals with higher vulnerabilities due to a trauma history tend to have lower social support? Understanding interlinkages of trauma, schizoid personality, interpersonal relationships, and substance problems is important for lowering recidivism rates among juveniles on probation and to facilitate rehabilitation. Findings were intended to enable practitioners to make informed treatment decisions and add to the current research on juvenile delinquency in several ways. First, the role of trauma for the development of illegal

activities was empirically studied. Second, the narrow focus on antisocial personality types in the development of substance problems was expanded to include introverted types. Third, I explored whether social support acted as a mediator between internal and external risk factors and substance problems for this population.

Research Questions and Hypotheses

This study addressed four research questions:

Question one. Research on resilience has indicated that strengths as well as risks are related to outcomes. How were potential strengths (social support) and risks (trauma, schizoid personality) related to each other and to the negative outcome (substance problems)?

***Hypothesis 1.1*.** It was hypothesized that trauma and schizoid personality would significantly and positively correlate with each other and with lifetime substance problems at intake.

Hypothesis 1.2. It was hypothesized that social support would significantly and negatively correlate with lifetime substance problems and schizoid personality traits at intake.

Question two. Was a four-factor model of trauma, schizoid personality, social support, and substance problems adequate for representing those constructs for juvenile males on probation?

***Hypothesis 2.1*.** It was hypothesized that the four-factor model would statistically confirm that the constructs are valid, and that the measurement model is well specified.

Question three. Personality research suggests that negative parent-child interactions directly impact the child's sense of self. Specifically, schizoid personality symptoms are elevated in children who have suffered emotional abuse (Berenbaum, Thompson, Milanak,

Boden, & Bredemeier, 2008). The disintegrating effects of psychological trauma and the tendency of trauma survivors to defend against disintegration by numbing their emotional reactions through substance use leads to the idea of pathways (Henry, Oetting, & Slater, 2009). Also, peers shape socializing behaviors of youths, and are therefore considered to be part of developmental trajectories and adjustment (Henry et al., 2009). What were the relations between trauma, schizoid personality, social support, and substance problems among male juveniles on probation?

Hypothesis 3.1. It was hypothesized that trauma would have a direct, positive, and significant association with the development of schizoid personality traits.

Hypothesis 3.2. It was hypothesized that schizoid personality would negatively impact social support due to interpersonal difficulties that result in withdrawal.

Hypothesis 3.3. It was hypothesized that social support would have a significant, negative relation with substance problems.

Hypothesis 3.4. It was hypothesized that schizoid personality would have a positive, direct, and significant association with substance problems.

Hypothesis 3.5. It was hypothesized that trauma would have an indirect, positive association with substance problems.

Question four. Previous studies have shown that deviant social support accounts for the effect of trauma on delinquency (Maschi, Bradley, & Morgen, 2008). Does this mediating effect work in reverse, that is, does prosocial support alleviate the negative association of trauma with deviant behaviors, specifically substance use?

Hypothesis 4.1. It was hypothesized that social support would act as a mediator between personality and substance problems.

It was anticipated that findings from this study would provide a model for conceptualizing rehabilitation that reflects intrapsychic and extrapsychic pathways between trauma, personality, and substance use. The proposed study was designed to have significance not only for the youth offender population but for youths at-risk in general, school teachers, parents, probation officers, researchers, and treatment providers.

Chapter II

Literature Review

When studying adolescents who have engaged in deviant behaviors defying societal rules and norms, it is useful to consult psychological theories of human development. It is important to caution against using models of psychopathology designed for adults because adolescence represents a unique developmental stage. This is specifically relevant when studying personality because it is a fluid construct that undergoes considerable changes during adolescence, when teenagers actively pursue an identity and differentiate themselves from their parents. When studying personality in adolescents the term *schizoid* can evoke negative associations and pathologize a personality type that is adaptive for many individuals. The study aims at maintaining a compassionate attitude toward schizoid traits since it is conceptualized as a reaction to early maltreatment and betrayal by formerly trusted individuals. This chapter presents a literature review of substance use problems, interpersonal relationships, personality, and trauma specific to the adolescent offender population in order to highlight the complex involvement of a variety of factors.

Adolescents with an Offending History

The adolescent population deserves research attention because it is a unique group with developmental challenges that all too often are insufficiently incorporated into effective intervention and prevention efforts. For example, in adolescence developmental tasks entail transitioning into assuming adult roles, forming an identity, and increasing autonomy (Erikson, 1968; Mulvey, Schubert, & Chassin, 2010). However, the adolescent brain has not yet matured, and self-regulatory areas of the brain are not yet fully developed (Mulvey et al., 2010). For some, delinquent acts such as underage drinking may represent a feeling of

autonomy; for others, however, substance use may signify a maladaptive way of coping with unwanted feelings. Youth antisocial behavior is a complex phenomenon that involves many factors spanning across developmental stages.

In 2009 there were approximately 4 million juveniles between the ages of 10-17 arrested, which was 14% of the total juvenile population in the U.S. (Puzzanchera, Adams, & Kang, 2012). The majority of serious crimes, i.e., serious violent and property crimes, were committed by young adults 18 years and older (Siegel & Welsh, 2012). Some large-scale studies like the Monitoring the Future study from the University of Michigan suggests that the official data may underreport actual rates (Siegel & Welsh, 2012). Yet, violent juvenile crime is less typical than nonviolent crimes, e.g., property offenses (Redding, Goldstein, & Heilbrun, 2005). For juveniles who were admitted to correctional facilities, a large percentage (60%) reoffended within three years in the state of California in the fiscal year of 2004-2005 (California Department of Corrections and Rehabilitation, 2010). Moreover, Latino youths had the second highest state-level incarceration recidivism rate after African Americans, which makes them a high-risk group (California Department of Corrections and Rehabilitation, 2010). It is important to note that immigration per se has been associated with a reduction in violence because immigrants were found to be less violent than the general population (Siegel & Welsh, 2012). In a study on dating partner violence Sanderson, Coker, Roberts, Torolero, and Reininger (2004) found that Latinos and Latinas who were more acculturated, that is who had assimilated to the values and norms of the host culture, were more likely to report dating violence (i.e., physical assault). Le and Stockdale (2008) found that Asian youths who experienced acculturative dissonance, which refers to conflict as a result of different acculturation rates among family members, were more likely to engage in

serious violence. It appears that challenges of integration into a new host culture pose potential risk or protective factors for antisocial behaviors, depending on the level of acculturation. Another element of antisocial behaviors is gender whereby males represent a higher risk group for delinquency than females; however, female crime has been found to be underreported (Siegel & Welsh, 2012).

The way society intervenes in juvenile offending behaviors has changed over time. In 1899 the first juvenile drug court was established in Illinois. At that time youth crime was relatively low and involved predominantly nonviolent crimes (Redding et al., 2005). The focus was on understanding the underlying causes for deviant behavior, and state intervention was supposed to be a corrective parenting experience for the youths (Redding et al., 2005). Even though the juvenile courts incorporated a holistic approach to youth criminal activity, in 1922 only 7% of juvenile courts offered mental health services (Redding et al., 2005). At the end, juvenile courts were perceived as too lenient and ineffective, and imprisonment was considered the only viable choice for community safety (Redding et al., 2005). When juvenile crime rates were rising in the 1980s legislators proposed *getting tough* with youths who commit crimes, and changes in the legislature allowed transfers of minors from the juvenile to the criminal court where they could be tried as adults (Redding et al., 2005). Currently, there is a return to treating rather than punishing juvenile crime (U.S. Department of Justice, 2014). This policy shift is based on empirical studies showing that services are more effective than confinement (U.S. Department of Justice, 2014). Today there is consideration of developmental aspects, such as cognitive ability, peer influence, and fluidity of personality in the response to juvenile crime (U.S. Department of Justice, 2014).

Juveniles with a criminal history face particular challenges for reentry after incarceration. For example, they may return to dysfunctional homes, domestic violence, deviant peer groups, and substance abuse within the family system (U.S. Department of Justice, 2014). Correspondingly, many juveniles with a criminal history face a number of risk factors, such as growing up in single parent households without father figures and with little parental supervision or social support (Guerra et al., 2008). Moreover, many have been subjected to maltreatment, poverty, and dangerous neighborhoods (Guerra et al., 2008; Jaffee, Strait, & Odgers, 2012). Thus, many of the risk factors tend to persist since they are related to familial structures, parental attachment, and living conditions complicating rehabilitation. Another hurdle to rehabilitation is concerned with school reintegration. Many youths on probation may struggle with completing school and find employment because they have limited work history and a criminal record (U.S. Department of Justice, 2014). The vicious cycle of low academic performance and limited educational goals due to a criminal record exacerbates school difficulties (Guerra et al., 2008; U.S. Department of Justice, 2014). Moving forward in dealing with the complex phenomenon of youth crime the National Institute of Justice recommends several changes: For one, it proposes raising the minimum age for criminal court from 21 to 24 years of age (U.S. Department of Justice, 2014). And, it suggests creating alternative correctional centers for youths where treatment is offered, including drug and mental health treatment (U.S. Department of Justice, 2014). At the beginning of the 21st century policy makers consider taking the youth's age into consideration and decreasing severity of penalties for younger people. They are increasingly aware of the necessity to conduct risk and needs assessments with youths in correctional settings, and to offer services for mental wellbeing and academic success.

In a way, one could argue, policies on youths who commit crimes have come full circle. They align themselves with a developmental perspective taken in the early 1900s but expand on the interventions and services made available to adolescents who engage in antisocial behaviors.

Substance problems. Targeting substance problems when working with youths who engage in illegal activities is a priority. First of all, the rate for substance abuse and dependence among youths with a criminal record are higher than for noncriminal youths (Goldstein, Olubadewo, Redding, & Lexcen, 2005). Second, substance use has been linked to delinquency (Goldstein et al., 2005). Arguably, committing crimes under the influence may be facilitated by lowered inhibition and impaired judgment (Goldstein et al., 2005). And, criminal activity may be the means to the end for a drug user who, in order to maintain his drug habit, needs substantial amounts of money (Goldstein et al., 2005).

Among adolescents in the country as well as world-wide, cannabis is the preferred substance among psychoactive drugs (Dennis et al., 2002; Substance Abuse and Mental Health Services Administration, 2010). The American Academy of Child and Adolescent Psychiatry (2013) states that cannabis use is the highest in 30 years. School problems, mental health disorders, physiological dependence, and arrests are some of the reported outcomes of cannabis use (Dennis et al., 2002). Moreover, Dennis et al. (2002) wrote in their research report on cannabis treatment effectiveness that cannabis-related arrests not only pertain to possession but to more serious offenses, such as property and violent offenses. Hence, cannabis use among youths is not only a personal problem but a societal issue.

Research has shown that when consuming cannabis under the age of 18 the youth is 2.5 times more likely to develop a dependence to that substance compared to when using it

over the age of 18 (Dennis et al., 2002). Moreover, regular use of marijuana can lead to dependence by which discontinuing use will cause feelings of irritability, changes in appetite and mood, sleep disturbance, and anxiety (American Academy of Child and Adolescent Psychiatry, 2013). Tetrahydrocannabinol, the active ingredient of marijuana, can create school difficulties, increase aggression, other drug use, and risky sexual behaviors as well as heighten the risk for suicide and psychosis (American Academy of Child and Adolescent Psychiatry, 2013). Long-term effects of marijuana use include mental health disorders and lower levels of energy and motivation (American Academy of Child and Adolescent Psychiatry, 2013). Clearly, the effects of marijuana can be severe despite some proponents arguing for its harmlessness.

When studying substance abuse it is critical to acknowledge the fact that a large number of substance abusers have another diagnosable psychiatric disorder (Drake, Mueser, Clark, & Wallach, 1996). The co-occurrence of psychiatric symptoms with substance problems negatively impacts treatment prospects because individuals with a dual diagnosis tend to show poorer psychosocial adjustment (Drake et al., 1996). Common comorbid disorders include antisocial personality, anxiety, and depression (Armstrong & Costello, 2002). Additionally, having a parent who uses illicit substances moderates the association between adolescent depression and substance use (Gorka, Shankman, Seeley, & Lewinsohn, 2013). Comorbid symptoms of youths who abuse substances are low self-esteem, rebelliousness, antisocial behaviors, and depression (Armstrong & Costello, 2002). In their metaanalytic study Armstrong and Costello (2002) found that similar to previously reported levels of comorbidity among adults, for adolescents with substance use, abuse, or dependence, 60% suffered from another mental health diagnosis. Clearly, substance abuse

occurs within a context of maladjustment and should not be considered the sole focus of intervention since it is often interwoven with other symptomatologies.

An early onset of drug use (before the age of 18) is a risk factor for developing axis II disorders, such as borderline personality, antisocial personality disorder, and passive-aggressive behaviors (Franken & Hendriks, 2000). There is a plethora of research on the role of impulsive personality traits and substance problems. Specifically, low levels of ego control and high levels of disinhibition have been associated with antisocial behaviors (Gunn, Finn, Endres, Gerst, & Spinola, 2013). A study by Gunn et al. (2013) found that impulsivity and disinhibition were two personality traits that accounted for most of the variance explained in the outcome variable of alcohol problems. Furthermore, they found that social deviance was a risk factor for individuals high on impulsivity to develop alcohol use disorders (Gunn et al., 2013). Children and youths with callous and unemotional traits have been shown to be at higher risk for substance use (Wymbs et al., 2012). They tend to display lower feelings of empathy and guilt, and higher levels of psychopathy and delinquency in general (Frick & White, 2008). Commonly, substance use problems are associated with externalizing symptoms, such as aggressive and antisocial behaviors (Krueger et al., 2002; Mason, Hitchings, & Spoth, 2007). There appears to be a consensus in the addiction literature that the role of emotion regulation deficits is central for the development of certain personality traits, such as low harm avoidance, high novelty seeking, and impulsivity (Finn, 2002). Comparatively few studies have looked at the link between internalizing traits to substance use. Seinfeld (1991) argues that in the case of schizoid personalities the drug comes to represent a nonthreatening object that generates a “symbiotic experience” (Seinfeld, 1991, p. 101) filling the inner void. Similarly, for trauma survivors it is the soothing and

merging effect drugs simulate that increases their vulnerability to substance abuse (Khoury, Tang, Bradley, Cubells, & Ressler, 2010). In order to understand substance use and other antisocial behaviors among youths on probation a multiplicity of factors must be taken into account. Those refer to personality characteristics, trauma history, peer relations, and the unique developmental stage of adolescence.

Object Relations Theory

Object relations are interpersonal relationships that are part of a person's most fundamental desire or libido because they strengthen the self (Fairbairn, 1952; Silverstein, 2007). Objects can be thought of as actual persons that carry a maternal or caregiving role in a child's life (Silverstein, 2007). Babies form a relationship to the world and subsequently to themselves by relating to an external object, i.e., the mother (Winnicott, 1986). In other words, relating to others is a behavior external to the individual that has an intrapsychic function. Object relations theory directs attention to disturbances in early parent-child interactions that negatively affect the child's personality development and interpersonal functioning. Social relationships from a psychoanalytic account are far more than having someone to talk to; they are essential for developing self-regulatory mechanisms. Object relations are critical for developing an inner sense of self that can be distinguished from, yet that is related to, an outside reality (Winnicott, 1986).

According to Winnicott (1986) children need to be reared in a "good enough" (p. 22) home with a mother or caretaker who adapts to the child's needs and facilitates development. He notes that the mother's preoccupation with the child's needs is critical, so that the child experiences an omnipotent object that is strongly attuned to his needs until he is able to tolerate some frustrations without being traumatized by mother's shortcomings (Winnicott,

1986). Recognizing the child's needs (attunement) and responding to the child's internal processes by reflecting them back (mirroring) are essential caretaking roles that communicate emotional availability and interest (Gilbert, Allan, & Goss, 1996). Adequate object relations in infancy are established by a variety of activities by the caretaker, such as looking at the child, smiling, appropriate touching, and joining the child in his gaze or activity. Object relations theorists state that a child requires love, recognition, and attention from an object to develop a sense of self and reality of self. If the caregiver fails to provide attunement to the child, he will experience this as a rejection regardless of the reasons for the lack of love (Seinfeld, 1991). As a result the child internalizes the parent as a bad object who failed to meet his most basic needs. This leads to feelings of deprivation and inner emptiness (Seinfeld, 1991). According to the British object relations school internal and external objects fulfill qualitatively different relationships; that is, the child who experienced frustrating external object relations is turning to internally generated fantasies of mergers and identification with the desired object (Seinfeld, 1991). Hence, the libido for connection is turned inward toward objects of fantasy. It is this process that has great significance for the development of antisocial behaviors such as substance problems. Object relations theory adds to the biological model of addiction by claiming that impulses have to be met by a self-state. In the case of the schizoid personality type the self has become dissociated, so that drug addiction is a reflection of a dissociated self-state that once was yearning for love (Seinfeld, 1991).

Psychoanalytic self-psychology theorists have proposed that the parents' or selfobjects' lack of mirroring and love can have long-lasting negative consequences for the development of the child, and it contributes to the development of schizoid personality

disorder (Fairbairn, 1952; Guntrip, 1968; Winnicott, 1986). The term selfobject stems from Kohut's (1977) self psychology theory that is related to object relations and emphasizes the "internal psychological experience of an object" (Silverstein, 2007, p. 37). Mirroring is an important selfobject function that serves to satisfy the child's needs for recognition and praise (Silverstein, 2007). It helps the child develop a sense of reality of self that is worthy. Guntrip (1968) describes schizoid tendencies as a reaction to negative selfobject relations. Failures by the mother as the mirroring selfobject put the child at risk for being traumatized due to experiencing a discontinuity of existence (Winnicott, 1986). Hence, from a psychoanalytic point of view the absence or inconsistency of parental adaptation to the child is a risk factor for the child's self-fragmentation enhancing the vulnerability for maladaptive personality types.

Fairbairn (1952), one of the pioneers of the object relations school, studied schizoid personality intensely. He asserts that schizoid states stem from failed object relations that leave the child feeling unloved and rejected. The early rejection translates into a fear of closeness and true intimacy, and behaviors of withdrawal and chosen isolation (Fairbairn, 1952). Individuals who experience schizoid states fear that their love will destroy the object because it is too consuming (Seinfeld, 1991). They therefore prefer relying on internalized object relations and inner fantasies. They are able to role-play sociable interactions when necessary and can therefore easily be overlooked and underestimated in terms of their psychopathology and suffering. Similarly, self-psychology theory is helpful for understanding the emergence of personality and personality disturbances because it is concerned with "the self's structural defects and shortcomings [in an interpersonal context]" (Morrison, 1984, p. 74). From that perspective a personality disorder results from insufficient

selfobject responding to the child's needs for "affirmation, merger, and idealization" (Morrison, 1984, p. 74). Affirmation is related to empathic attunement discussed earlier. Merger describes the experience of fusion of the self with a selfobject whereby the internal experience is temporarily fused with the external (selfobject's) experience. Idealization, from Kohut's (1977) perspective, refers to the three main areas of self, which are the "two polar areas" (p. 49) of the grandiose self, the "idealized parent imago" (p. 49), and the "executive functions [that are] talents and skills" (p. 49). The grandiose self is related to feelings of omnipotence and perfection, which can lead to narcissistic disturbances if they are not mirrored by the mother. For example, a child who stands up for the first time needs to see pride in his mother's eyes, a smile, and encouragement in order to satisfy an experience of self and of his potential. The child also maintains a feeling of omnipotence by projecting it onto his caregivers, which is called the "idealized parental imago" (Kohut, 1977, p. 49). The child's idealizing expectations of the parent will unavoidably be frustrated, which will transform the child's internalization to accept strengths and weaknesses in himself and others. For example, mother may not look at him every time he takes a new step or makes a discovery. Experiencing such frustrations within an overall caring, consistent caregiving relationship helps the child de-intensify his grandiose self to enable more mature self-selfobject relations (White & Weiner, 1986). Finally, the child needs the executive functions to achieve the ambitions represented by the grandiose self and the idealized parent. Ultimately, this will lead to productivity and meaning creation.

Fairbairn notes that schizoid characteristics are an outcome of unsatisfying emotional bonds with parents and particularly with mother (Fairbairn, 1952). This includes possessive and indifferent mothers who leave their children emotionally deprived, which causes

regression to more primitive states for basic love need satisfaction. This more basic state may lead to depersonalization and "de-emotionalization" (Fairbairn, 1952, p. 14) of object relations. As a result children may develop low distress tolerance and dependence in adult life. The traumatic experience that underlies schizoid characteristics stems from an emotional frustration because the mother does not love the child for himself and because she does not accept and value his love for her (Fairbairn, 1952). This coins the child's interpersonal style to adopt a distanced stance toward others since they are unable to fulfill his love needs. Intra-psychically, the child shifts object relations inside of himself where he relates to internalized others by incorporating or taking as opposed to giving and sharing. According to Fairbairn (1952) individuals with schizoid traits fear to give themselves emotionally to others because it feels to them like losing parts of their personality. They do not receive the same intrinsically motivating emotions from giving, such as creating values and self-respect (Fairbairn, 1952). Another resulting feature from the relational trauma is the experience of inferiority due to not feeling loved in their own right (Fairbairn, 1952). This sense of low self-worth may lead to a fixation on mother and narcissism as a defense against it (Fairbairn, 1952).

The schizoid character, albeit rare in the general population, appears to be relevant for the offender population. That is because it relates to antisocial behaviors in several ways: First, it is known that the prison population has elevated rates of trauma and dysfunctional family relationships that may foster schizoid traits; second, the process of identification (a defense mechanism) with a bad object, i.e., the perpetrator of abuse, can lead to criminal behavior. Because the libido relates to parental objects, forms of abuse create inner conflict that can leave the child feeling ashamed. By means of identification with a parent who

abuses, the child develops a sense of badness (Fairbairn, 1952). For Fairbairn (1952) whether a child becomes delinquent or not depends on several factors; the extent of internalization of the bad object in the unconscious, the degree of dysfunction of the object, the extent of identification with the bad object, and the ego defenses available to protect against acting out the bad object. Fairbairn (1952) makes an interesting and important point that a child may be motivated to engage in antisocial behaviors in order to release the repressed badness, and to protect the ideal image of his parents that appear good opposite to his badness. As a result, some of the character traits of schizoid personality may be considered defenses against a repressed, internalized bad object.

In sum, parenting is critical in the child's personality development because by serving as selfobjects parents help the child develop the affective and self-affirming structures it relies on for development and later functioning. Mirroring and idealization serve the narcissistic development and experience of omnipotence, which precede self-esteem and adaptation (Morrison, 1984; Winnicott, 1986). When considering the experience of abuse by the hands of the caregiver or selfobject, it becomes apparent how devastating relational trauma can be for a child's development.

Personality and Antisocial Behaviors

Surprisingly, differences in personality factors are rarely addressed in treatment allocation and intervention. This is astonishing provided that personality characteristics have significant influence on interpersonal and intrapersonal functioning that are central for recovery and rehabilitation. It is helpful to think of personality in dimensions to represent developmental levels and typologies (McWilliams, 2011). The dimensions can have substantial overlap, and people tend to oscillate along the dimensions because their

functioning is impacted by stressors. The developmental dimension distinguishes between mature and primitive defenses. The typology dimension captures the specific kind of defenses used, and helps classify them along the developmental dimension. For example, personality types using denial would be classified at the lower end of maturity and at the higher, more severe end of the typology. It is important to note that this study refers to personality types rather than personality disorders as listed in the *DSM-IV-TR* because it takes the participants' developmental stage into consideration. Adolescence is a developmental phase in which personality is still emerging and traits are flexible. It is important to note that personality is conceptualized as a fluid construct consisting of propensities that undergo developmental changes and that are directly affected by stressors in the environment, such as poverty and poor family relations (Moffitt et al., 2002; Trentacosta et al., 2009). Therefore, it is helpful to think of personality type as propensity or tendency, rather than a permanent set of thought and feeling patterns.

Personality disturbances comprise of patterns of cognition, affect, impulse control, and interpersonal relationships. Individuals who suffer from personality disorders have inner experiences and perceptions that are often not mirrored by the outside world and do not meet society's expectations and norms (4th ed., text rev.; *DSM-IV-TR*; American Psychiatric Association, 2000). Personality disturbances can therefore result in high levels of distress for the individual. Personality disorders like many other disorders occur on a spectrum of high and low intensities that include overlaps with other, related disorders. For example, schizoid personality shares symptoms of a lack of interest in personal relationships and emotional detachment with autism spectrum disorders. Furthermore, it is critical to diagnostically differentiate schizoid symptoms from contextual factors that affect an individual's emotional

style and behaviors. Growing up in disadvantaged neighborhoods and experiencing ethnic discrimination can cause individuals to display detachment and emotional indifference as a form of self-protection that should not be classified as a personality disturbance.

Schizoid personality. Many individuals with schizoid personalities are highly functioning, hold jobs, and lead productive lives (McWilliams, 2011). A schizoid personality style describes individuals who tend to be introverted and solitary (4th ed., text rev.; *DSM-IV-TR*; American Psychiatric Association, 2000). Individuals high on this trait tend to be shy, avoid competitive relationships, and are described as eccentric (2nd ed.; *DSM-II*; American Psychiatric Association, 1968). Individuals with schizoid traits display autistic thinking that entails daydreaming without a loss of a sense of reality (2nd ed.; *DSM-II*; American Psychiatric Association, 1968). When confronted with an unpleasant stimulus, such as a disagreement, individuals with schizoid traits rather withdraw than express hostility (2nd ed.; *DSM-II*; American Psychiatric Association, 1968). Since diagnostic definitions and criteria of schizoid personality disorder have changed over the years, it is difficult to determine population prevalence. In an effort to represent national prevalence rates in the general population Grant et al. (2004) took data from the *National Epidemiologic Survey on Alcohol and Related Conditions* (n = 43,093) and found that 3.13% met diagnostic criteria of the *DSM-IV* for schizoid personality disorder. The most common personality disorder was obsessive-compulsive personality disorder (7.88%). Overall, approximately 15% of adult Americans met criteria for at least one personality disorder. The researchers concluded that personality disorders are prevalent in the general population and are highly associated with disability (Grant et al., 2004).

Guntrip (1968) argues that individuals who develop schizoid tendencies have come to

believe that wanting love is in itself potentially destructive, which is why they prefer staying aloof. A cluster A personality is therefore different from a cluster B, e.g., antisocial personality, in terms of the defenses employed against a negative object. An individual with schizoid tendencies disengages instead of becoming angry and appears to choose being emotionless instead of confronting an intolerable feeling of rejection from a negative object. Schizoid personalities can be characterized as splitting themselves from the world but without a loss of reality as found in the psychotic states of schizophrenia, for example (McWilliams, 2011). McWilliams (2011) argues that individuals with schizoid tendencies tend to feel overwhelmed by emotions and therefore choose disengagement as a defensive mechanism from this threatening state. Individuals with schizoid traits experience a fear that their need for love is destructive and exaggerated so that they "cancel object-relationships" (Guntrip, 1968, p. 26). Expressing love is considered dangerous and therefore replaced with indifference (Guntrip, 1968). Importantly, the withdrawal into the internal world is a reaction to unmet needs or frustrations with the selfobject. Thus, individuals with schizoid traits secretly desire the object, whereas individuals with autism do not. There are significant overlaps of a depressive and a schizoid state because they both ascertain a sense of loss of hope and loneliness. Yet, schizoid tendencies are less concerned with a loss of object than with a loss of self (Guntrip, 1968). Guntrip (1968) views the schizoid problem to be the polarization of relatedness with rejection and identification of objects at either extreme, and at the expense of continuity of the ego and individuation. The desire for identification with the object is ultimately regressive because it reflects a state of complete dependence and merger with the object similar to the prenatal period in the womb. Benjamin (1996) conceptualizes individuals with schizoid personalities as having grown up in functioning

families that socialized the child for taking on societal roles and jobs, yet that created a formal home life in which solitary activities were fostered and emotional interactions were scarce. From her perspective on personality, she states that, when growing up in such households, individuals who develop schizoid tendencies lack interest in social connections and are indifferent to praise or criticism from others (Benjamin, 1996). They present with emotional coldness and do not report sexual activity (Benjamin, 1996).

Characteristic of schizoid personalities are introversion and withdrawal, narcissism, self-sufficiency, a sense of superiority, loss of affect, loneliness, depersonalization, and regression (Guntrip, 1968). Introversion is the result of emotionally detaching from the outer world and finding refuge in fantasy. The narcissism of schizoid personalities is based on a "disguised internalized object-relation" (Guntrip, 1968, p. 42) whereby the individual creates objects within himself that he becomes identified with. To an outsider, a person with a schizoid personality may appear therefore completely self-sufficient and primarily concerned with himself. The preoccupation with one's internal life serves to veil painful feelings of emptiness and loss of self. This is similar to narcissistic personality types who develop defenses that serve to hide a grandiose, infantile self as a means to fill an inner emptiness (Kohut, 1977). Narcissism is a symptom that has significant overlaps across personality clusters since it is prevalent in antisocial and borderline personalities as well. Hence, excessive narcissism is a core construct for the development of maladaptation. The schizoid personality communicates self-sufficiency because interactions with the external world are limited and are carried out intrapsychically instead. According to Guntrip (1968) this is a defense against the anxiety of interactions with others. The paradoxical effect of individuals with schizoid traits is that they display self-sufficiency and a sense of superiority albeit

feeling entirely dependent and psychologically incorporated by others. Guntrip (1968) calls this "overcompensation" (p. 43) because it is an attempt to lower feelings of inferiority and weakness resulting from feeling dependent on others. This is accompanied by a flat affect presentation whereby those individuals show little concern for others and their feelings, which makes them appear callous. Emotional callousness is a character trait observed in antisocial personality as well and a commonly reported characteristic of youths engaging in criminal behaviors. Another characteristic of schizoid personality is loneliness. Individuals who report feeling separated from others and the social world around them describe an affective split that is typical for schizoid personalities. Finally, depersonalization and regression are probably the two most debilitating traits of a schizoid personality. The former creates sensations of un-reality and loss of self, and the latter evokes infantile urges of merger and dependency.

Individuals with schizoid traits are prone to avoid human closeness because of their emotional fragility and the fear of regression into primitive states of self (Seinfeld, 1991). They often display "devitalization" (Silverstein, 2007, p. 74) and a lack of enthusiasm about goals for their own lives. They tend to not feel passionate about their interests and are unable to give their lives direction (Silverstein, 2007). Treatment efforts that are heavily reliant on group-based interventions may not be effective with this group. Similarly, skills-based interventions that foster clients' motivations for pursuing their interests and legal hobbies may not resonate with schizoid individuals based on the preceding description. Since schizoid symptoms are the outcome of parental emotional unresponsiveness and neglect, therapeutic interventions targeting a corrective experience of the early, central object relationship are important for recovery (Seinfeld, 1991). Seinfeld (1991) argues that

borderline personalities are the outcome of abuse, whereas schizoid personality types are the result of neglect. Schizoid features are a form of regression where the individual considers any attempts to relate to others and the world as futile (Fairbairn, 1952). When children come to believe that they are a burden to their parents they internalize that they are worthless and not loved; moreover, they may come to think that their need for love is overwhelming to their environment (Seinfeld, 1991). This can be particularly relevant for children from homes where a parent struggles with mental illness, such as depression, and is emotionally unavailable to the child. In order to help those clients psychoanalytic case studies point to the role of empathic attunement and confrontation of the client's self-destructiveness (Kohut, 1977; Seinfeld, 1991). By establishing a symbolic child-parent relationship the therapist can come to represent a caring, attuned parent fostering the integration of self in the client.

In conclusion, personality types are integral for understanding adaptation as well as maladaptation. Schizoid personality traits have a significant overlap with the impulsive and antisocial personality type, and both types depend on immature defenses. Moreover, schizoid personalities share intrapsychic experiences of "…falseness, split experiences, difficulty with affect tolerance, and internalization of toxic others" with dissociative, narcissistic, and borderline disorders (McWilliams, 2011, p. 203). The schizoid self is diagnostically differentiated from other disorders by the symptoms of eccentricity and lack of concern with others' approval (McWilliams, 2011). Traditionally, personality-based explanations of delinquency considered an overactive *id*, the part of the self that is demanding, primitive, and "prerational" (McWilliams, 1999, p. 21), and a weak *superego*, also described as instance of self-evaluation and morality, as predictors of delinquency (Shoemaker, 2009). Applying a similar model to the schizoid type may indicate that a split *ego* explains some of the person's

self-destructive behaviors, such as substance abuse, that occur in the context of disintegration of personality functions and a loss of reality.

Personality as a factor of resilience. The resilience literature has pointed to the role of personality for the development of risky and antisocial behaviors in children and adolescents. Personal attributes are incremental to resilience because they can increase an individual's proneness to "sensation seeking, emotion regulation deficits, and novelty seeking" (Oshri et al., 2011, p. 635), all of which have been related to maladaptive, antisocial behavior. A longitudinal study by Oshri et al. (2011) assessed the effects of ego control and ego resiliency on externalizing behaviors along mediation models for children at three time points: between the ages of 7 to 9, 10 to 12, and 13 to 15. The authors were interested in how personality characteristics affected the relationship between childhood maltreatment and cannabis abuse. They implemented the *California Child Q-Set Instrument* developed by Block and Block in 1969, which contains 100 items referring to the children's personality, cognitive and social characteristics (Block & Block, 1980). They found that the severity of early childhood abuse was related to more ego undercontrol and less ego resiliency. Ego undercontrol indicates impulsive behavior that for low levels of ego resiliency tends to occur in socially inappropriate ways and contexts. The two maladaptive personality attributes preceded externalizing problems in preadolescents and cannabis abuse symptoms in adolescence (Oshri et al., 2011).

Findings from a study in 2005 indicated that for physically, emotionally, or sexually abused Latino children (Mean age = 6.68 years, *SD* = 1.78) higher ego resiliency and moderate ego overcontrol were related to resilience (Flores, Cicchetti, & Rogosch, 2005). Furthermore, having an outside, positive source of social support, i.e., a camp counselor, was

beneficial for both maltreated and nonmaltreated children. Future research is needed to study the effects of protective factors in the face of abuse. Related resilience research looking at the role of ego strengths was conducted by Cicchetti and Rogosch (1997) comparing maltreated and nonmaltreated children's functioning (Mean age = 8.03 years, *SD* = 1.47) over three years. This longitudinal study measured functioning by self-report and caretaker-report on social competence, school performance, internalizing and externalizing behaviors (Cicchetti & Rogosch, 1997). Results showed that for nonmaltreated children positive and close relationships to the mother and other caretakers mattered, whereas for abused children and adolescents it was personality characteristics and levels of self-control that yielded adaptive outcomes (Cicchetti & Rogosch, 1997). Specifically, maltreated children benefited more from ego overcontrol, ego resilience, and self-esteem. Ego overcontrol implies an inhibited personality style that suppresses affect expression. In certain contexts a more inhibited personality style may be beneficial because high levels of emotionality may interfere with functioning. This study points to the usefulness of ego strengths for maltreated children whereby having a trauma history may result in greater difficulty with forming meaningful interpersonal connections with adults, so that building up intrapersonal strengths of self-control and adaptability may compensate for trauma-related vulnerabilities. In summary, ego strength is an important factor for wellbeing and psychological adaptation. The development of ego strength is threatened by abuse and inadequate parenting, which can lead to behavioral problems.

Mental health problems as the result of trauma or genetic predispositions are another internal risk factor. Two-thirds of male youths in the juvenile justice system are estimated to have one or more psychiatric disorders (Teplin, Abram, McClelland, Dulcan, & Mericle,

2002). Male detainees report most frequently three types of trauma: witnessing violence, having been threatened with a weapon, and thinking that someone close to them was going to be badly hurt or die (U.S. Department of Justice, 2013). A lot of research has been dedicated to examining the subsequent development of posttraumatic stress disorder (PTSD) that is often comorbid with other psychiatric disorders (U.S. Department of Justice, 2013). A study by Abram and colleagues (2004) found that in a sample (n = 1829) of youth detainees from a Chicago-based detention center 11% of the males and 15% of the females endorsed PTSD. Critics have questioned the universality of the construct of PTSD. They suggest conceptualizing PTSD along a dimensionality of behavioral propensities and personality types. That is, among individuals with a trauma history, the antisocial personality type is more likely to externalize distress, whereas an anxious personality is turning inward. Research on the veteran population identified personality-based differences on how traumatized individuals express their distress (Miller, Greif, & Smith, 2003). Hyer, Davis, Albrecht, Boudewyns, and Woods (1994) found that there are subtypes of PTSD that fall on the two extremes of behavioral reactions to distress: internalization and externalization. Individuals who fell in the anxious and inhibited personality type cluster had lower levels of substance abuse and narcissism than individuals in the impulsive and antisocial cluster (Hyer et al., 1994). Another study employing the Multidimensional Personality Questionnaire on 221 male combat veterans found that there are three distinct clusters of posttraumatic responses, which were low pathology, internalizing, and externalizing behaviors (Miller et al., 2003). Externalizing propensities were associated with substance abuse and internalizing ones with depression (Miller et al., 2003). The low pathology cluster one may call resilient in the domain of mental health outcomes. It appears that when trauma and personality interact,

they produce differences in behavioral and affective outcomes in trauma survivors. Also, generic diagnostic labels like PTSD may prove to be inadequate to assess for the presence of trauma because reactions to trauma are in line with personality styles and therefore differ fundamentally across individuals.

Pathways of resilience. Resilience is impacted by external factors such as family and peer relationships. In terms of family attributes, research suggests that the quality of attachment and the type of parental monitoring predict adaptation (Flores, 2004). Literature on emotion regulation shows how important parenting is for the development of adequate emotion expression that controls behavioral outcomes of internal states (Zeman, Cassano, Perry-Parrish, & Stegall, 2006).

Trauma. A critical variable when studying youths who commit delinquent acts is trauma. While trauma is classified as an external factor since it is done to the child by someone else, it has long-lasting if not permanent internal effects. Trauma is defined as the intrapsychic outcome of the meaning of a stressful event that directly impact one's sense of self. The American Psychiatric Association (4th ed., text rev.; *DSM-IV-TR*; 2000) defines a traumatic event as one in which "the person experienced, witnessed, or was confronted with an event or events that involved actual or threatened death or serious injury, or a threat to the integrity of self or others" (p. 463). It stresses that the reaction of the affected individual is critical whereby a traumatized person shows "intense fear, helplessness, or horror" (4th ed., text rev.; *DSM-IV-TR*; American Psychiatric Association, 2000, p. 463).

Victimization and abuse have a gross impact on the child's psychological and social functioning. Children who were victimized through neglect, physical, emotional, or sexual abuse are likely to experience difficulty with regulating their own emotions, and are thus

vulnerable to develop negative behaviors and mental disorders. A classic study by Stouthammer-Loeber, Loeber, Homish, and Wei (2001) found that victims of abuse were more likely to engage in overt problem behavior such as minor aggression and physical fighting. Additionally maltreated children were four times more likely to display high-risk authority avoidance behaviors like truancy, running away, and status offenses (Stouthammer-Loeber et al., 2001). They also found that maltreated boys follow certain pathways to antisocial behavior, which the authors called the authority conflict, the overt and the covert pathways. Maltreated boys were more likely to progress along the overt pathway, which entails varying degrees of deviance such as bullying, fighting, and rape (Stouthammer-Loeber et al., 2001). Also, maltreated children were more likely than the control group to reach the most severe level of the authority conflict pathway, i.e., truancy. However, maltreated children did not differ from the control group on the covert pathway that is associated with vandalism and theft.

There is a solid research basis for the link between delinquency and trauma. Harmony, cohesiveness, and strong emotional bonds between family members have been found to relate to less delinquency (Shoemaker, 2009). Children, whose parents are warm, responsive, and accepting, are more likely to regulate their emotions (Zeman et al., 2006), which points to the critical role of parenting for fostering resilience. The ability to regulate emotions is a protective factor because it enables the individual to pursue goals in a persistent manner (Bowers et al., 2011; Buckner, Mezzacappa, & Beardslee, 2003). Parental arguing, financial stress, and abuse are risk factors for committing crimes (Shoemaker, 2009). The high prevalence rate of trauma among the population of youths with a criminal history is alarming. As the U.S. Department of Justice (2013) reported 93% of detained youths had

experienced at least one traumatic experience and 84% had experienced more than one trauma. Those trauma rates dramatically surpass those of adolescents from the general population. Traumatic experiences pose a significant risk factor for the development of psychiatric disorders such as depression, substance use, or conduct disorder, which places youths on probation into a high vulnerability group (U.S. Department of Justice, 2013).

Trauma negatively impacts the psychic organization of an individual and causes emotional dysfunction that affects intrapsychic and extrapsychic domains like self-esteem and social support (Martens, 2005). Martens (2005) stresses that trauma increases the victim's suspiciousness of the outside world because the victim's trust was violated evoking a strong sense of vulnerability. It can therefore trigger schizoid states and feelings of hostility and separateness from the outside world. A study by Widom, Marmorstein, and White (2006) found that victims of childhood abuse and neglect reported using a significantly higher number of different drugs than their matched controls. This trend continued across life phases whereby abused and neglected children reported more illicit drug use in middle adulthood than their nonabused counterparts (Widom et al., 2006). The authors concluded that while drug use and drug experimentation is normative in adolescence and emerging adulthood, victimized children were more likely to continue using drugs beyond those developmental phases (Widom et al., 2006). Rosenberg et al.'s (2013) study on 350 incarcerated youths found that at least 94% reported at least one traumatic experience and that trauma exposure was significantly correlated with PTSD, depression, and substance abuse. Another study employing the typologies of internalizing versus externalizing personalities examined 568 Spanish participants addicted to drugs and found that, those who clustered in the more severe group, i.e., lower socioeconomic status and less education and income, displayed schizoid

traits and were addicted to heroin and multiple drugs (Graña, Muñoz, & Navas, 2009). Clearly, there is empirical evidence and theory about the pathways of trauma and personality types, and the risks for substance problems associated with internalizing tendencies of withdrawal, suspiciousness, and emotional detachment.

A study conducted by Bernstein et al. (1998) looked at inner-city substance-dependent veterans to find out whether the types of trauma they experienced in childhood could predict different personality clusters. They found that when using restrictive cut-off scores physical abuse was reported by the majority (23%), followed by sexual abuse (25%), and emotional abuse (24%). Moreover, emotional abuse predicted borderline, histrionic, narcissistic, avoidant, paranoid, and dependent personality disorders. Physical abuse and physical neglect predicted antisocial and sadistic personality disorders. In sum, emotional abuse predisposed the individual to anxiety-prone, mistrusting character traits, and impulsive personality types, i.e., borderline, histrionic, and narcissistic. Importantly, emotional neglect was related to schizoid personality traits confirming the conceptual link between emotional neglect and schizoid personality (Bernstein et al., 1998). Similarly, a study investigating the link between childhood trauma and personality disorders among an outpatient sample confirmed previously reported findings on the effect of emotional neglect on cluster A personality types, i.e., paranoid, schizoid, and schizotypal (Bierer et al., 2003). The impact of emotional neglect may play a far greater role in the development of serious personality disturbances than previously thought.

Support for the trauma-personality pathway came from research conducted by Daud et al. (2008). They compared traumatized Swedish children to a control group on a number of intrapsychic and extrapsychic domains. They found that the traumatized group showed

significantly higher levels of internalizing symptoms (anxiety, muscle tension, guilt, suspicion), higher externalizing symptoms (impulsiveness, verbal aggression, irritability), and more detachment than the nonmaltreated group (Daud et al., 2008). Daud et al. (2008) argued that early maltreatment leads to impaired personality traits. Related research found that emotional abuse was correlated with dissociative symptoms (Löffler-Stastka et al., 2009). Dissociative symptoms have been studied frequently in individuals who suffer from borderline personality disorder, but they are present in schizophrenia and depersonalization disorders as well (Löffler-Stastka et al., 2009). Dissociative symptoms, such as splitting, are part of a defense mechanism that works to create an altered state of consciousness resulting in a loss of a coherent perception of the environment (Löffler-Stastka et al., 2009). Psychoanalytic theory understands dissociation as a defense mechanism against intolerable affective experiences that are part of traumatic events (Löffler-Stastka et al., 2009). Hence, traumatic experiences have deleterious consequences on the individual's functioning by altering the way he relates to himself and the world. In other words, trauma creates a personality pathway.

Social support. Social support appears to be a palpable concept by which resources are provided by others; yet it is in fact multifaceted and complex (Harley & Eskenazi, 2006). Ways of measuring social support range from assessing types, frequency, and kinds of support to asking participants whether they felt supported (Harley & Eskenazi, 2006). This is also referred to as structural and functional measures, whereby the former addresses the size of the support network and the latter appraises perception and function of support received (Harley & Eskenazi, 2006). In order to capture the concept of social support in its entirety, it is important to expand the types of social support provided to include a variety of sources.

Peer relationships have been described as a protective factor, especially during the developmental period of adolescence where peer groups assume functions for identity development (Dekovic, 1999). Sports, friends, and creative outlets are important factors in the process of individuation in which adolescents seek more time spent with peers than parents. In other words, there is a developmental transition from a primary parental support system into a primary peer support system in adolescence (Helsen, Vollebergh, & Meeus, 2000). Group membership bestows a sense of belonging and control, which can help overcome feelings of marginalization or isolation. Peer groups provide emotional support, offer the opportunity to experiment with different roles, and to engage in self-disclosure. This is especially important for adolescents who are in the process of forming their identity and establishing their autonomy. Importantly, research shows that it is the satisfaction with social support that is associated with resilience and not the frequency or importance attributed to the support (Born, Chevalier, & Humblet, 1997).

Research has linked social support in adolescence to a range of outcomes. For example, adolescents with poor social skills showed higher internalizing problems, such as depression (Nilsen, Karevold, Røysamb, Gustavson, & Mathiesen, 2013). Moreover, there is evidence for gender differences whereby a lack of friends was positively associated with (i.e., increased) depressive symptoms for girls but not for boys. DuBois et al. (2002) reported that social support predicted emotional and behavioral adjustment in adolescence by acting as a mediator. This implies that social support positively affects internal strengths, for example self-esteem, which in turn fosters wellbeing and adjustment. Notably, social support can produce negative effects. For example, it appears that potentially negative effects are domain-specific whereby peer support has been linked to higher externalizing problems

compared to adult support (DuBois et al., 2002). Yet, in their study DuBois et al. (2002) found that adolescents preferred support from the peer domain, which may put them at risk for a negative trajectory.

This leads to a discussion of the complexity of social support in the case of delinquent youths, in particular. Many youths who engage in illegal activities are affiliated with gangs. For many, their gang is a form of social support. Gang affiliation as a form of peer membership has been linked to alcohol and illicit drug abuse as well as criminal activities (Mouttapa et al., 2010). Gangs may therefore be a double-edged sword in that they function as social support and simultaneously pose risk factors in other domains, i.e. substance abuse and criminal activity. Mouttapa et al. (2010) argue that the process underlying the association of gang membership with drug abuse is through identification with gang member characteristics, such as aggressive behaviors and drug use. It is the identification with the negative characteristics that leads to negative outcomes in the context of gang affiliation. Moreover, Mouttapa et al. (2010) state that focusing on the identification process enables researchers to understand how even those youths who are not in a gang, but identify with it and its culture, are more likely to engage in negative behaviors (Mouttapa et al., 2010). Sharkey, Shekhtmeyster, Chavez-Lopez, Norris, and Sass (2011) explored how basic needs of belonging and identity that cannot be found elsewhere are met by gangs. Indeed, gang members often come from low socioeconomic neighborhoods that offer few opportunities for prosocial activities and little hope for a better future. Moreover, families residing in such neighborhoods tend to suffer systemically from disrupted relationships, absent fathers, and domestic violence. Hence, youths from these environments are looking for an alternative to provide them with their needs for esteem, respect, and dignity (Sharkey et al., 2011). Studies

distinguished resilient from nonresilient individuals based on their association with deviant versus nondeviant peers (Fergusson & Lynskey, 1996). Deviant peer behavior such as drug use and criminality puts individuals at higher risk for engaging in those acts themselves via modeling and social learning. Previous research has depicted gangs to be antisocial and predictive of substance use and criminal activity. The resilience research describes gang membership as a risk factor because of its association with alcohol use and crime in general (Hunt & Laidler, 2001). Yet, there is the potential that gangs are helpful in developing competencies based on self-esteem and self-respect. Some findings suggest a more nuanced role for gangs as they can provide sources of social support, acceptance, and socialization along group cultural norms for members. This study is less concerned with the source of social support than with its function as something positive in the youth's life that is conducive to self-development.

To sum, maladaptation is the outcome of a combination of risks, such as psychological trauma, personality features, and lack of support. Trauma impacts personality development and increases the likelihood for inner fragmentation and feelings of emptiness that pose risk factors for ensuing substance problems and isolation. By accommodating the main psychoanalytic concepts under investigation into a resilience framework, this study is able to integrate intrapsychic processes with ecological dynamics. Such an approach is best suited for addressing disturbances in adolescence and for recognizing the fluidity of risks and strengths that swiftly alter pathways into positive or negative directions.

Resilience model. In order to organize internal and external resilience factors it is helpful to draw upon a framework that is able to capture the interrelations of risk and protective factors, contexts, and outcomes. A framework proposed by Cicchetti and Rogosch (2002) advocates for a

developmental perspective from which to assess resilience. According to this framework, risks arise whenever stage- and age-salient tasks were not mastered, so that the child progresses to the next developmental stage with a specific vulnerability. This study applies this model to the psychoanalytic account of schizoid personality and substance problems. For example, a child experiencing abuse by a family member may develop a chronic low sense of self, a general mistrust of other people, as well as a restricted range of emotional expression preventing him from forming satisfying interpersonal relationships. Hence, early trauma set in motion a pathway to schizoid traits, which in turn may negatively impact the subsequent developmental stage of adolescence when peer group interaction is central for mastering autonomy and individuation tasks.

This framework suggests that psychological wellbeing rests upon the successful transition through developmental stages and the mastery of stage-specific demands to develop crucial capacities. Moreover, it suggests that individuals develop along trajectories, which describe adaptive or maladaptive functioning. Importantly, individuals can change their trajectory and move from maladaptive pathways to more adaptive ones. This framework helps to explain how early traumatic experiences are vulnerabilities that may heighten the risk for developing certain personality types that isolate and emotionally detach from their surroundings. Individuals with such vulnerabilities may continue on a maladaptive trajectory toward substance problems, or, they may change their trajectory in the face of protective factors, i.e., social support.

The developmental psychopathology perspective suggests a successive, hierarchical arrangement of developmental components that interact with contextual stressors placing the individual at risk for maladaptation. This does not imply that early functioning causes a particular, adaptive pathway; rather it increases the probability of a certain pathway that leads

to positive outcomes. Also, different pathways can yield similar outcomes, so that adolescents with a diversity of risks and strengths can achieve similar positive outcomes, i.e., academic success, emotion regulation, self-efficacy, or negative outcomes, i.e., high school drop-out, conduct disorder, substance abuse, and delinquency. This has been termed "equifinality" (Cicchetti & Rogosch, 2002, p. 11) whereby different pathways, processes, and personality traits lead to the same outcome. What kind of pathway an individual's development takes depends on the interplay of biological and psychological predispositions as well as on external factors (i.e., trauma, economic deprivation, quality of interpersonal relationships) (Cicchetti & Rogosch, 2002). I believe that merging a resilience framework with a psychoanalytic model of personality is beneficial, particularly when studying youths, because it includes strengths as well as the concept of malleable trajectories.

This section reviewed some of the personal and external attributes of resilience. Although those factors should not be considered in isolation of each other and of the developmental context, they represent principal factors involved in adaptation. To sum up, resilience processes describe how early traumatic experiences predispose individuals to risk factors of low ego strengths and emotion regulation difficulties. Schizoid traits may emerge as a result when adolescents prefer spending time alone and create internal self-selfobject experiences that make them appear self-sufficient. While examination of schizoid symptom presentation is rarely found in the criminal justice literature that tends to focus on antisocial personality types, it is of critical importance because of the high prevalence rates of mental illness for individuals with a criminal record in general (Loza & Hanna, 2006). The "equifinality" (Cicchetti & Rogosch, 2002, p. 11) of substance problems demands the expansion of the research lens to investigate other possible trajectories.

Summary of Psychodynamic Processes for Substance Problems

From a psychoanalytic perspective the use of illicit substances serves to uphold self-regard and fill an inner emptiness that resulted from insufficient mirroring by objects. Illicit substances mimic object relations' functions when they provide the user with experiences of merging with something omnipotent and being mirrored by something grandiose, i.e., the drug (Ulman & Paul, 2006). But addiction is also looked at as the result of an attachment disorder whereby dissatisfying interpersonal relationships created an inner emptiness that leads to high levels of discomfort and distress that drugs can help soothe (Flores, 2004). People suffering from addictions generally display deficits in interpersonal functioning and have difficulty navigating mutuality, intimacy, and responsibility in their relationships (Flores, 2004). As a result, many addiction treatment programs implement opportunities for forming new, positive, and potentially corrective interpersonal relationships. Whereas experimentation with illicit substances is normative during adolescence, behaviors of hiding it or having friends and family complaining about the adolescent's use, reflect a more serious level of risk. Moreover, the threshold for treating vulnerable youths should include subdiagnostic substance use behaviors due to the presence of developmental pathways that have long-term consequences. The association between substance use and criminal behavior is another reason for the importance of intervening in the potentially negative trajectory of a teenager who has suffered abuse, displays schizoid personality features, and reports smoking marijuana daily or more frequently.

Chapter III

Methods

This study investigated trajectories of early trauma and schizoid personality development as well as associations of personality type with social support and substance problems. A structural equation model served to analyze whether or not trauma impacts the extent of schizoid traits, and whether or not schizoid traits increase the severity of substance problems in youths on probation. Moreover, a mediation analysis explored whether having social support accounts for the association of schizoid personality and substance problems.

Participants

Participants came from a cross-national sample (n = 1,029) of juveniles with a criminal history who had been recently released into their local communities. The sample was part of a national, multisite juvenile offender reentry grant awarded by the Substance Abuse and Mental Health Services Administration. I obtained permission to use cross-national data from Chestnut Health Systems and all the sites included in the analyses prior to conducting the current study. Only sites with complete data were included in the study. Fewer than 5% of the respondents had missing data on the independent variables and the outcome variable. According to Acuña and Rodriguez (2004) 5% of missing data is considered manageable and does not require sophisticated methods to handle. Entire sites for which missing data exceeded 5% were removed from the sample in order to avoid biasing results due to data not missing at random.

Participants were sampled from a total of 42 states and territories including Massachusetts, Wisconsin, Florida, Texas, Washington, Arizona, and California; they came from cities like New York, Cleveland, San Rafael, and Tampa. The majority (41%) of sites

were from the Western region, such as California, Arizona, Hawaii, Nevada, Guam, and the Pacific Islands. Half of the sites (55%) provided outpatient treatment of 1 to 8 hours weekly, followed by corrections (19%), and case management (14%). Forty-nine percent of sites implemented the Adolescent Community Reinforcement Approach (A-CRA) or the Assertive Continuing Care (ACC), followed by Cognitive Behavioral (CBT) or Motivational Enhancement Therapy (MET) (21%). A-CRA, ACC, CBT, and MET are evidence-based treatment approaches that are effective for decreasing problematic drug-related behaviors (Godley et al., 2001; U.S. Department of Health and Human Services, n.d.). All participants were male and between 13 and 18 years of age (M_{age} = 16.49, SD_{age} = 1.16). Fifty-three percent were of Latino descent, 27% were European American, 22% were African American, and 3% were Asian. At intake the mean grade of education completed by the youths was ninth grade (*SD* = 1.48).

In regard to family history, 51% reported a family history of alcohol problems, 46% had a family history of drug use, and 25% indicated a family history of psychological problems. The mean family size was 4.14 (*SD* = 1.96). The primary substance need for treatment was marijuana (53%); 19% had no substance treatment indicated, and 12% were in treatment for alcohol problems. Eighty-eight percent reported using substances under the age of 15, with the mean number of years of use being 4.36 (*SD* = 2.33). Marijuana was the primary drug of choice reported by most (47%), followed by alcohol (26%), and amphetamines (20%). More than half (59%) reported using substances more than three months ago; 32% used between three days and three months ago.

In relation to criminal history, 18.4% reported being a gang member, and the mean number of days participants reported being in a gang over the past year was 50.65 (*SD* =

123.26); the mean number of lifetime arrests was 5.69 (*SD* = 11.20). In terms of lifetime convictions, participants reported an average of 3.84 (*SD* = 6.63). At intake, 64% reported committing an illegal activity over the past year, 47% reported having engaged in property, 46% in interpersonal, and 37% in a drug crime.

Measures

Global Assessment of Individual Needs (GAIN). The GAIN is a standardized, evidence-based, biopsychosocial assessment of eight areas of functioning: background, substance use, physical health, risk behaviors and disease prevention, mental and emotional health, environment and living situation, legal, and vocational (Dennis, White, Titus, & Unsicker, 2008). It includes over 100 scales that were normed on adults and adolescents, and it has over 1,500 questions (Dennis et al., 2008). The GAIN's validity has been demonstrated by multimethod studies integrating urine or saliva tests and self-report measures (Dennis et al., 2008). Discriminant validity was assessed by using GAIN scales to predict independent and blind-staff psychiatric disorders (Dennis et al., 2008). It has been validated for adults and adolescents as an assessment and decision-making tool for drug use behaviors, diagnosis, treatment planning and allocation (Dennis et al., 2008). In regard to adolescents, the GAIN scales' internal reliability is acceptable to excellent (Cronbach's alpha ranges from .71 to .94) (Dennis et al., 2008).

Predictors. Severity and type of historical abuse (i.e., emotional, physical, and sexual abuse) were measured by two subscales of the General Victimization subscale of the GAIN (GVS; GAIN Coordinating Center, 2011). The GVS is a 15-item self-report measure developed to asses past and current abuse; the two selected subscales capture past abuse only including type of abuse and number of traumagenic factors. All 10 items of the two subscales

were dichotomously coded with 1 = *yes* and 0 = *no*. The GVS has good internal consistency, r = .88 (Titus, Dennis, White, Scott, & Funk, 2003). Higher scores indicate a more severe trauma history. Because of low item endorsement for two questions about sexual abuse, only eight of the ten trauma items were selected; those were: "was ever attacked with a weapon," "was ever beat to the point it left bruises," "was ever emotionally abused," "did previous trauma happen for several times," "did previous trauma occur with more than one perpetrator involved," "was a person of trust involved in previous trauma," "you were afraid for your life," and "did people told about previous trauma not believe you." In the current study the eight items had good internal consistency, r = .78.

Schizoid personality traits were assessed using the Cautious Personality Index (CPI; GAIN Coordinating Center, 2011), a subscale of the Personality Coping Style Scale of the GAIN. The CPI consists of six items rated dichotomously where 1 = *yes* and 0 = *no*, and it assesses the extent to which the participant handles emotional issues by avoidance, distrust, or escaping. Higher values indicate a more schizoid personality style and high levels of mental distress. Items were: "could not trust people," "rather than mad, get even," "tried to space out world," "didn't care to be around people," "not emotional about people," and "afraid you were crazy." The CPI corresponds with criteria of the schizoid type outlined in clinical case studies presented in the preceding section. In previous empirical studies the CPI has been used to evaluate the interpersonal relationship in therapy, also called working alliance. In this study the CPI had good internal consistency, r = .73.

Social support was measured by the General Social Support Index (GSSI; GAIN Coordinating Center, 2011) that counts the number of sources of social support identified by the participant including professionals, family, friends, school mates or work colleagues over

the past 12 months. Higher scores on this variable indicate a greater number of social supports. Items include: “a professional counselor or other health provider to talk to,” “friends or colleagues from other companies or schools you could talk to without worry about things getting back to others at work or school,” “people at work or school you could talk to about day-to-day things,” “people at work or school who could help you get your assignments done,” “family members or close partners you could talk to and rely on,” “friends you could just hang out with and not talk about work or family issues,” “a (legal) hobby or activity that you enjoyed and did for yourself,” “someone you felt like you could talk to about needs and emotions,” “someone you felt could help you figure out how to cope with any problems you were having or might have.” All nine items were dichotomously coded by 1 = *yes* and 0 = *no*. The GSSI has been used in studies on therapeutic alliance where individuals with more social support reported closer connections with their therapist (Garner et al., 2008). Internal consistency of the GSSI in this sample was good (r = .84).

Outcome. Substance problems were measured by the Substance Issues Index lifetime (SIIL; GAIN Coordinating Center, 2011), a subscale of the Substance Problem Scale Lifetime (SPSL). The SPSL was previously shown to have good internal consistency for adolescent respondents, r = .90 (Dennis et al., 2008). For this sample, the SIIL had good internal consistency, r = .71. The SIIL was measured at intake; participants were asked about recency of drug use, with higher values reflecting more recent use, and thus a worse outcome. The SIIL counts symptoms of substance related problems, including two items on substance-induced health and psychological problems, and three items on severity symptoms of use (i.e., hiding use, people complaining about use, weekly use). The first three questions are commonly used in alcohol and drug screeners. A list of all the items can be obtained from

the Appendix. Each item was continuously rated on a 4-point Likert scale where 0 = *never*, 1 = *more than one year ago*, 2 = *2-12 months ago*, and 3 = *past month*. This outcome measure was conceptualized as a resilience construct, so that current struggles with substance use represent a maladaptive outcome, and fewer struggles indicate an adaptive outcome.

Procedure

Nearly all (99%) of the sites had the GAIN administered orally by a staff member using pen and paper (53%) or a computer (38%); some did not specify (9%). All participants were informed about the purpose of the study and their right to withdraw their assent at any time. Parental consent was received prior to survey administration. The GAIN was administered at intake, 3, 6, 9, and 12 months after intake; only intake data were used in the current study. Over 90% of sites administered the GAIN within one session.

Most GAIN intake assessments (86%) were collected within a window of minus 28 and plus 7 days of the admission date. Intake referrals for participants came from a juvenile justice institution (62%), an assessment or intake unit (20%), an inpatient or outpatient treatment program (12%), or the community (6%). GAIN data were collected by treatment staff trained and certified by Chestnut Health Systems.

Data Analysis Plan

I employed a post-positivist, nonexperimental approach, which implemented a quantitative analysis in order to test the relations between childhood trauma, schizoid personality development, and substance problems among juveniles on probation (Creswell & Clark, 2007). Prior to running latent variable models all data were analyzed using SPSS IBM 22.0 and Mplus 6.0 software (Muthén & Muthén, 1998-2010). For descriptive results and demographic data, means, standard deviations, and frequencies were calculated. The data

were screened for univariate normality, missing data, and outliers. To answer research question one, correlations for all variables were run.

For research question two a confirmatory factor analysis (*CFA*) was run using Mplus 6.0 (Muthén & Muthén, 1998-2010). Because the factor structures of trauma, social support, schizoid personality, and substance problems were adopted from existing scales, an exploratory model was unnecessary. The mean- and variance-adjusted weighted least squares (WLSMV) estimation method was used, which is a default in Mplus for analyzing categorical variables. In general, weighted least squares (WLS) is an estimator that has a fit function weighted by variances, covariances, and kurtosis. It requires a large sample size (Brown, 2006). Additionally, the WLSMV can be used to estimate regressions for both, binary and continuous factor indicators (Muthén & Muthén, 1998-2010). Model fit for *CFA* and the subsequent structural analysis was evaluated referring to fit statistics (outlined in the subsequent chapter), significance of path coefficients, parsimony, and alternative models based on theoretical underpinnings.

If the *CFA* model fit was found to be adequate and in order to test the hypotheses of research questions three and four, a structural equation model (*SEM*) assessed the hypothesized relations among the four factors of interest (i.e., trauma, schizoid personality, social support, and substance problems). Structural equation modeling entailed model identification, parameter estimation, evaluation of model fit, and exploration of alternative models. In order to assess if the proposed model is identified, both direct and indirect regression paths were specified. Specifically, paths were drawn corresponding to theory whereby past psychological trauma creates affective disturbances in the victim who feels ambiguous about intimacy. As a consequence, victims of abuse were hypothesized to be

more likely to isolate from others and create a rich internal world of fantasies that serve to simulate safety and fulfilling love object relations, and yet signify loneliness and separateness. Those schizoid symptoms were hypothesized to decrease the likelihood for having social connections.

In order to determine whether the final model could be specified given the sample size, path model parameters that were known versus unknown were calculated beforehand. In the proposed final model, there were 28 loadings, 28 errors, 4 repression paths, 3 disturbances, and 1 variance resulting in a total of 64 to-be-estimated parameters. When applying a rule of thumb of 10 observations per parameter, a total of 640 participants suffice to detect any differences from the null model (Schreiber, Nora, Stage, Barlow, & King, 2006). In other words, the current sample of 1,029 is adequate for the planned analyses.

Concerning model identification, the proposed model had 406 nonredundant pieces of information in the variance-covariance matrix. The nonredundant pieces are defined as $[p(p+1)]/2$, where p equals the number of observed variables in the model. Because the number of nonredundant pieces exceeds the number of parameters to be estimated (64), the proposed model was overidentified. An overidentified model is preferred in *SEM* because it implies that there are more known than unknown variables, which permits estimation of parameters and testing of alternative models (Kline, 2011). In a final step an alternative model was tested by specifying a direct path from trauma to the outcome. Since latent variable models are not causal but depict one possible way of interrelations, one should test alternative models, especially when indicated by theory (Kline, 2011). Only recursive models, that is models where regression paths flow in one direction, were estimated.

Chapter IV

Results

Descriptive Analyses

First, the assumptions of normality were tested. Nonnormality due to binary indicators of the trauma, schizoid, and social support factors were addressed by the WLSMV estimation method. For two items, "forced into sex" and "resulted in oral/vaginal/anal sex," mean scores were < .02, indicating that less than 2% of the sample endorsed them. Following this analysis, those two trauma items were dropped because they were not representative of the sample. For the five substance items that were continuously measured, matrix scatterplots, histograms, and Q-Q plots were inspected for linearity, normality, and homoscedasticity. Following cut-off score criteria of |2.0| for skewness and |7.0| for kurtosis (Curran, West, & Finch, 1996) none of the continuous items showed violations of normality or linearity. Moreover, since the estimation method used was robust to nonnormality and the sample size was large, threats by potentially skewed items were minimized. Bivariate correlations were run for all subscales to determine linearity of relationships among all variables.

In order to provide descriptive information on the sample, frequencies were run to obtain percentages of affirmative responses to past traumatic experiences, schizoid traits, social support, and substance problems (see Table 1). In regard to past traumatic experiences, the most common experiences reported were having been attacked with a weapon, followed by being beaten. The most commonly reported trauma severity factor, regardless of type of abuse, was the fact that the abuse had occurred with more than one perpetrator involved. A

small proportion was currently worried about being attacked. The mean age of first victimization was 12.53 (*SD* = 3.18).

In terms of personality type, interpersonal difficulties were reported by over half the participants who felt that they could not trust most people and would want to get even rather than mad. Fewer reported dissociative symptoms, such as trying to space out the world. Approximately one-third indicated withdrawal and isolative tendencies like not caring to be around people, and not being emotional about people. The smallest number endorsed more severe feelings of disintegration and going crazy. In general, affirmative responses were varied indicating a range of responses. Exceptions were found for some of the trauma items and one schizoid item. The lower endorsement of the two trauma items and one schizoid personality item may be the result of the stigma that is associated with abuse, specifically sexual abuse, and severe mental illness, e.g., being afraid of being crazy.

For social support, participants indicated that a majority felt they had family members who they could talk to and rely on. Similarly high was the frequency for having peers to hang out with and not talk about work or family issues. Overall, nearly all participants indicated at least one form of social support. That is, they said *yes* to at least one or more items on the survey.

Affirmative responses for substance problems were calculated for answers that indicated some lifetime use. For example, positive answers to using substances one year ago or more recently were coded *yes*. The majority of participants said that alcohol and other drug (AOD) use never made them feel depressed or experience any other kind of psychological problem. Half of the participants indicated that they used AOD weekly or more often in the past 2-12 months compared to a third saying they were trying to hide AOD use, and parents or others

complained about their AOD use for the same time frame. Irrespective of a time frame, a majority of participants reported using AOD weekly, and indicated that others were complaining about their AOD use at some point in their lives. Therefore, it appears that a large proportion of the sample showed problematic substance use behaviors or substance problems. Table 1 represents the percentages of affirmative responses to the study items.

Research Question One: How Were Strengths and Risks Related To Each Other and To Negative Outcomes?

For addressing research question one, bivariate relationships between subscales of past trauma, schizoid personality traits, social support, and substance problems at intake were run to determine directionality of relations and significance level of Pearson correlations. Consistent with the study's hypothesis 1.1, trauma was significantly and positively related to substance problems ($r = .19$, $p < .01$). Similarly, schizoid personality was significantly, positively correlated with substance problems ($r = .28$, $p < .01$). Moreover, trauma was significantly, positively correlated with schizoid personality ($r = .39$, $p < .01$). Correlational strengths ranged from weak to strong. This confirmed hypothesis 1.1, (see Table 2).

In order to answer hypothesis 1.2, correlations of social support with substance problems and schizoid personality were inspected. Results show that the correlation between social support and substance problems was statistically not significant ($r = .01$, $p = .80$); yet, the correlation between social support and schizoid personality was ($r = -.12$, $p < .01$). This confirmed hypothesis 1.2 except for the correlation between social support and substance problems that was not significant as predicted. Overall, correlational strengths varied from negligible (< .19) to weak with none of them being strong suggesting that external and internal resilience items are related, yet distinct. Table 2 summarizes the findings.

Table 1

Percentages of Affirmative Responses to Study Items

Item	%
Trauma	
Attacked with weapon	52
Was beaten	41
More than one perpetrator	38
Abused over long time	28
Afraid for your life	17
Perpetrator so. you trusted	14
Abused emotionally	11
People told didn't believe you	6
Forced into sex	2
Resulted in vaginal/oral/anal sex	1
Schizoid Traits	
Could not trust people	60
Rather than mad, get even	54
Tried to space out world	44
Didn't care to be around people	37
Not emotional about people	35
Afraid you were crazy	11
Support	
Family members	86
Friends to hang out with	84
Talk about your needs	75
Legal hobby	74
Talk how to cope	74
Professional counselor	67
Help with getting things done	64
People at school	62
Friends from other schools	57
Substance Use	
Used weekly	87
Others complained	71
Tried to hide use	70
Caused psychological problems	34
Caused health problems	22

Table 2

Bivariate Correlations, Means, and Standard Deviations for Social Support, Substance Problems, Personality, and Trauma (N = 1,029)

		1	2	3	4
1	Social Support	-			
2	Substance Problems	.01†	-		
3	Schizoid Personality	-.12**	.28**	-	
4	Trauma	-.07*	.19**	.39**	-
	M	6.43	2.83	2.40	2.94
	(*SD*)	2.61	1.39	1.81	2.70
	Possible Range	0-9	0-5	0-6	0-8

*$p < .05$. **$p < .01$. †*ns.*

Research Question Two: Was the Four-Factor Model Adequate?

In order to address hypothesis 2.1, a *CFA* determined whether the measurement model for trauma, schizoid personality, social support, and substance problems was valid for the youth offender sample. A *CFA* was performed on the entire sample using the factor structure indicated by previous research. The aim of the *CFA* was to validate the four-factor structure for the sample; that is, it served to reveal whether the four latent constructs can be measured by the observed variables or survey items. The trauma factor was specified by eight indicators, all of which comprised a subscale of past traumatic experiences on the GAIN General Victimization Scale. Schizoid personality consisted of six indicators, all of which reflect criteria of the *DSM-IV-TR* and relevant case studies (4th ed., text rev.; American Psychiatric Association, 2000). Substance problems were measured by five indicators of the recency of problematic drug-using behaviors. Social support was measured by nine indicators capturing different sources of support at school, work, home, or outside of school. Each indicator had an error term indicated by the small error pointing to it as depicted in Figure 1. The error on the indicator reflects variance that is not explained by the latent factor. Factor loadings were considered adequate for values greater than 0.30 (Brown, 2006). The unstandardized factor loading of the reference variable for each factor was set to 1.0, while the remaining variables were allowed to be freely estimated. The following goodness-of-fit-statistics helped to determine adequate model fit: the comparative fit index (CFI; Bentler 1990), the Tucker-Lewis Index (TLI; Tucker and Lewis, 1973), and the root-mean-square error of approximation (RMSEA; Steiger and Lind 1980) were consulted. CFI and TLI values close to .95 (Hu & Bentler, 1999), and RMSEA values below .08 were considered adequate (Hu & Bentler, 1999). The chi-square fit statistic was examined but given less

weight in determining fit because of its sensitivity to sample size and the increased likelihood for committing a type I error (Brown, 2006; Raykov & Marcoulides, 2006).

Modification indices were requested in order to assess whether correlating any indicator error terms would improve overall fit. Decisions for modifications were based on the value of the modification index, the standardized expected parameter change, parsimony, and general fit. Good model fit demonstrated how well the estimated variance-covariance matrix resembled the observed variance-covariance matrix. Good model fit indicates that the model is appropriate to detect observed relationships and that it is able to explain a large percentage of the endogenous variables. Moreover, parsimony is a critical component of a good model since highly complex models have less free parameters and tend to have more constraints. Finally, the weighted root-mean-square residual (WRMR), which is a relatively new fit index, was not considered to determine the viability of the model because of a lack of established research on it.

The final *CFA* model had good fit, and the measurement model was well-specified for the sample; χ^2 (344) = 962.11, $p < .001$; RMSEA = .04, 90% CI [.039, .045], WRMR = 1.57, CFI = .95, and TLI = .94. Standard errors for all indicators were below .05. No model modifications were indicated. Moreover, factor loadings for all 28 indicators were significant suggesting that the observed variables were adequate for measuring their respective underlying construct. The indicators for substance problems were labeled SI (i.e., Substance Issues) in the diagram (Figure 1) in order to clearly distinguish them from the schizoid personality indicator labels. Table 3 lists the loadings for all indicators of the four factors; Figure 1 shows the measurement model for trauma, schizoid personality, social support, and substance problems. The four factors were significantly correlated with each other (with the

exception of substance problems that did not correlate with social support) suggesting that they are interrelated concepts. There was no indication of multicollinearity among the factors.

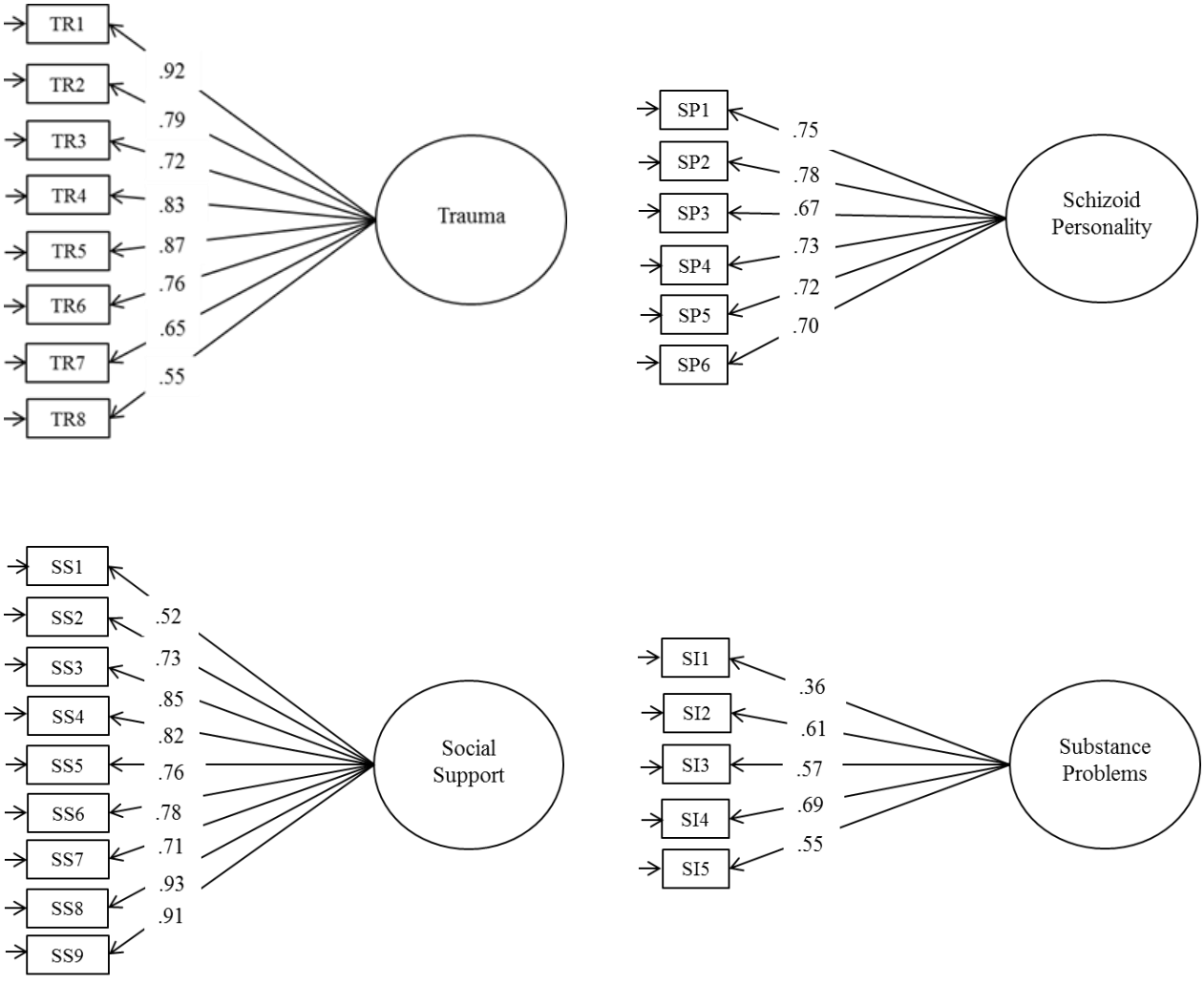

Figure 1. Measurement model with completely standardized factor loadings.

Table 3

Completely Standardized Factor Loadings for Twenty-eight Indicators

Indicator	Trauma	Schizoid	Support	Substance
Attacked with weapon	0.92			
More than one perpetrator	0.79			
Abused over long time	0.72			
Was beaten	0.83			
Perpetrator so. you trusted	0.87			
Abused emotionally	0.76			
Afraid for your life	0.65			
People told didn't believe you	0.55			
Rather than mad, get even		0.75		
Could not trust people		0.78		
Didn't care to be around people		0.67		
Not emotional about people		0.73		
Afraid you were crazy		0.72		
Tried to space out world		0.70		
Talk about your needs			0.52	
Talk how to cope			0.73	
People at school			0.85	
Help with getting things done			0.82	
Family members			0.76	
Friends to hang out with			0.78	
Friends from other schools			0.71	
Legal hobby			0.93	
Professional counselor			0.91	
Caused psychological problems				0.36
Caused health problems				0.61
Others complained				0.57
Used weekly				0.69
Tried to hide use				0.55

Note. All factor loadings were significant at $p < .001$.

Research Question Three: What Were The Relations Between Trauma, Schizoid Personality, Social Support, and Substance Problems?

A *SEM* model was specified in which psychological trauma was hypothesized to have an indirect effect onto substance problems and a direct effect on schizoid personality. Another path was modeled from schizoid personality to social support and to substance problems. Social support had a direct regression path onto substance problems. Together, trauma, schizoid personality, and support, were modeled to predict substance problems. All modeled relations are depicted in Figure 2. Factor loadings specified for each factor were allowed to be freely estimated, except for the reference indicator for each factor that was constrained to be 1.0 as part of unit-loading identification. Akin to the *CFA*, WLSMV was used as an estimation method, which was selected in the presence of dichotomous indicators in Mplus. When considering all four factors together, the model fit the data well: $\chi^2(346) = 914.12$, $p < .001$, RMSEA = .04, 90% CI [.037, .043], WRMR = 1.57, CFI = .95 and TLI = .95. Since model fit was good, no modifications were made.

Results for research hypotheses 3.1-3.5 show that the following path coefficients were significant in the hypothesized direction: trauma significantly and positively predicted schizoid traits (B = .43, β = .53, $p < .01$, $R^2 = .28$) when controlling for social support and substance problems. In other words, an increase in one standard deviation in trauma yielded a .53 standard deviation increase in schizoid personality characteristics. This supported hypothesis 3.1. The effect size suggested that trauma explains 28% of the variance of the schizoid personality factor. Next, when holding trauma and substance problems constant, one standard deviation increase in schizoid personality was related to a .16 decrease in social support; (B = -.11, β = -.16, $p < .01$, $R^2 = .03$) supporting hypothesis 3.2. Schizoid personality

was able to explain 3% of the variance in social support. When holding trauma and schizoid personality constant, the path coefficient from social support to substance problems was positive and not significant, failing to sustain hypothesis 3.3; (B = .04, β = .06, p = .13). Following, when controlling for past trauma and social support, one standard deviation increase in schizoid personality yielded a .41 standard deviation increase in substance problems; (B = .21, β = .41, p < .01, R^2 = .17). Schizoid personality explained 17% of the variance in the outcome. This confirmed hypothesis 3.4.

Finally, trauma had an indirect, positive, and significant effect on the outcome confirming that a more severe trauma history predicted more recent substance problems (hypothesis 3.5). The indirect path from trauma to substance problems via schizoid personality was significant; (B = .09, β = .22, p < .01, R^2 = .05) where trauma was able to explain 5% of the variance in substance problems when going through the schizoid personality pathway; the indirect path from trauma via schizoid personality and via social support to substance problems was not significant; (B = -.00, β = -.00, p = .19). Finally, the indirect path from schizoid personality to substance problems via social support was not significant; (B = -.01, β = -.01, p = .18). Table 4 lists both direct and indirect effects. The total effects in the model were .21 (p < .001). Goodness of fit statistics for both, *CFA* and *SEM* are displayed in Table 5.

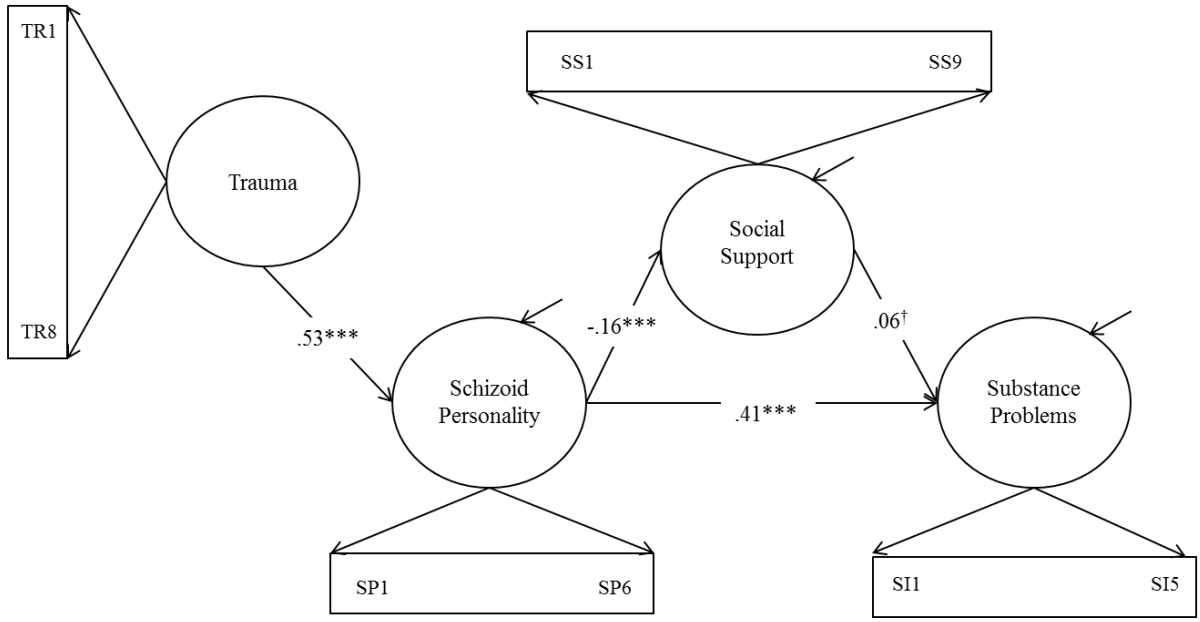

Figure 2. Structural model A with completely standardized regression paths.

Table 4

Direct and Indirect Effects of Substance Problems, Schizoid Personality, Social Support, and Trauma

Effect	Direct	Indirect	Total
Substance problems on schizoid	.41***	-	.41***
Substance problems			
on social support	.06†	-	.06†
on schizoid via social support	-	-.01†	-.01†
on trauma via schizoid	-	.22***	.22***
on trauma via social support and schizoid	-	-.01†	-.01†
Schizoid on trauma	.53***	-	.53***
Social support on schizoid	-.16***	-	-.16***

***$p < .001$. †*ns*.

Table 5

Goodness of Fit Statistics for Latent Variable Models

Model	χ^2	*df*	RMSEA [90% CI]	CFI	TLI
CFA: four-factor	962.11***	344	.04 [.039, .045]	.95	.94
SEM: four-factor (A)	914.12***	346	.04 [.037, .043]	.95	.95
SEM: four-factor (B)	923.38***	345	.04 [.037, .044]	.95	.95

***$p < .001$

Note. RMSEA = root-mean-square error of approximation; CI = confidence interval; CFI = comparative fit index; TLI = Tucker-Lewis Index.

Table 6

Chi-square Difference Test Results for Models A and B

Model		χ^2	*df*	$\Delta\chi^2$	Δdf
A	SEM: four-factor	914.12***	346	-	-
B	SEM: four-factor	923.38***	345	9.26	$\|1\|$

***$p < .001$

Research Question Four: Does Social Support Alleviate Negative Effects of Schizoid Traits on Substance Problems?

In order to address hypothesis 4.1, I implemented a mediation model to ascertain whether social support mediated the association of schizoid personality with substance problems. Baron and Kenny (1986) have outlined a classic approach to mediation that entails several steps; 1) testing whether there is a statistically significant relation between personality (independent variable; IV) and substance problems (dependent variable; DV) for path *c*, 2) regressing support (mediator; M) on IV for path *a*, 3) regressing DV on M (path *b*), and finally, regressing DV on both IV and M for path *c'* (Figure 3). To assess whether mediation occurred path *c'* is compared to path *c*; a decrease in strength of *c'* represents partial mediation whereas a change in significance indicates full mediation (Baron & Kenny, 1986). A mediation analysis is indicated when steps 1-3 are significant.

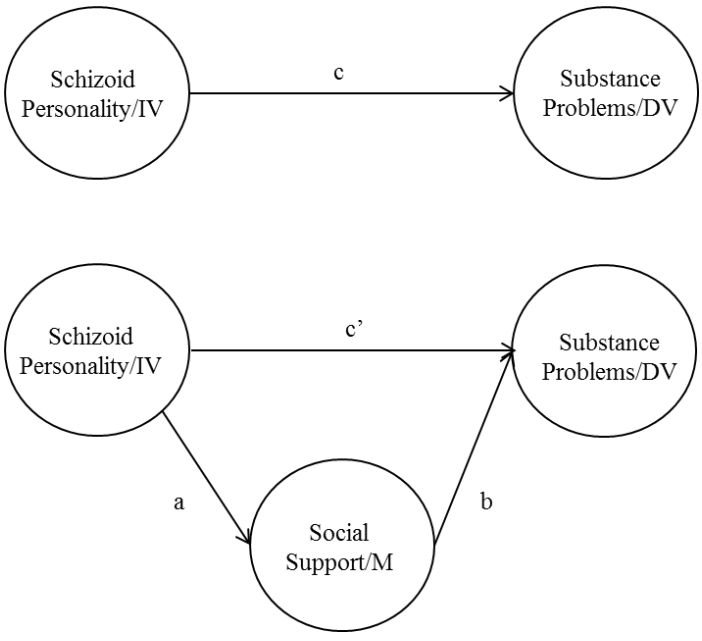

Figure 3. Mediation one.

Unlike a standard *SEM* analysis, mediation describes a causal relation between variables (Emsley, Dunn, & White, 2010). To assess hypothesis 4.1 direct paths from schizoid to substance problems (path *c*) and to social support (path *a*) as well as a direct path from social support to substance problems (path *b*) were inspected. Since paths *a* and *c*, but not path *b*, were significant, as shown by the initial *SEM* model described above, a mediation analysis was not conducted since social support was not indicated as a mediator. The lack of a significant path from social support to substance problems clarified that having different forms of support did not act as protective factor against substance problems.

Alternative Model. In order to evaluate an alternative model a new path was added that linked trauma (IV) to substance problems (DV); Figure 4. This created another mediation to be tested with schizoid personality as the mediator (M), substance problems as the dependent variable (DV), and trauma as the independent variable (IV).

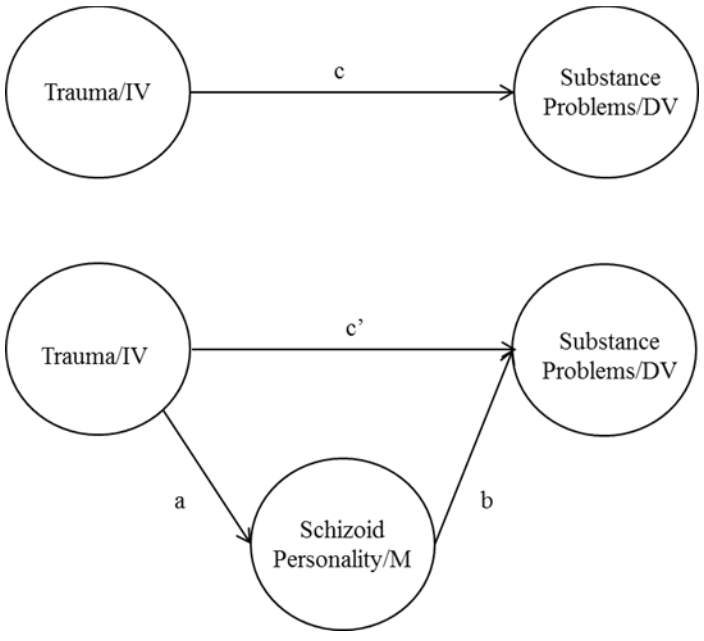

Figure 4. Mediation two.

Following Baron's and Kenny's (1986) mediation modeling steps, I tested first path *c*, controlling for path *a* and *b*, by modeling a direct path between trauma and substance problems. This path was significant; B = .13, β = .31, $p < .01$. Next, since the significance of paths *a* and *b* were already confirmed in the previous analysis for research question three, I continued with the final step. A mediation model with all three paths present was run to see whether the strength or significance of path *c* changed. I found that once both, IV and M, were included in the model, the path between trauma and substance problems (*c'*) ceased to be significant providing evidence for a full mediation (B = .01, β = .03, p = .51). The alternative model had good fit; χ^2 (345) = 923.38, $p < .001$, RMSEA = .04, 90% CI [.037, .044], WRMR = 1.57, CFI = .95 and TLI = .95.

In order to determine which model was preferred (the original model A or the alternative model B, Figures 5-6) a chi-square difference test was conducted. Model A was considered to be nested in the alternative model because it was a subset of the alternative model that had added a path from trauma to the outcome. Since comparing the two models based on their respective goodness-of-fit statistics was inappropriate because they were not equivalent in terms of the number of paths to be estimated, I relied on the results from the chi-square difference test (Table 6). When applying a critical value of 6.63 (α = .01), model B was preferred over model A; $\chi^2_{Difference}(1) = 9.26$, $p < .01$. Yet, chi-square statistics are generally less reliable in a *SEM* context due to the test statistic's sensitivity to sample size (Brown, 2006; Raykov & Marcoulides, 2006). In consideration of the large sample size of the study parsimony was favored over the chi-square difference test results, so that model A was the final, chosen model.

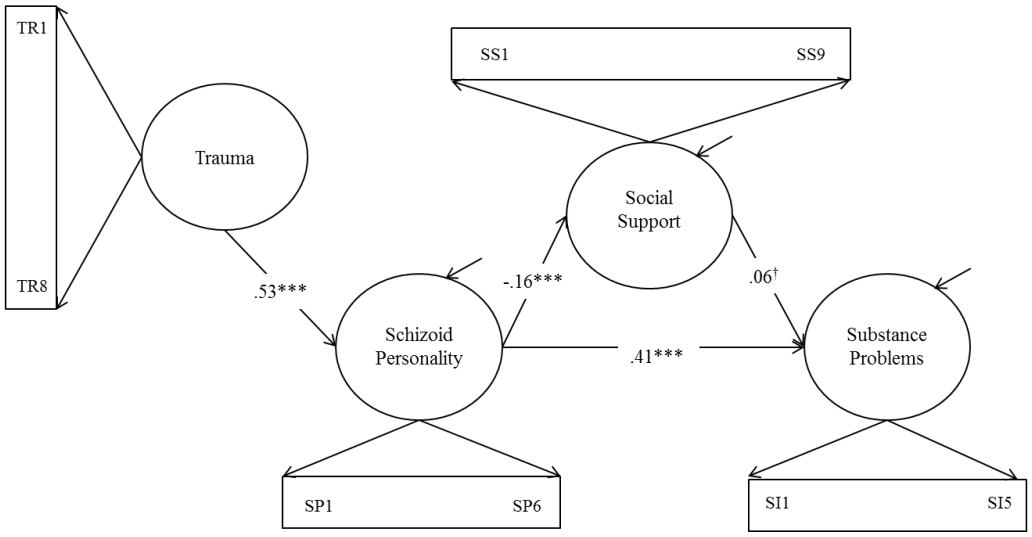

Figure 5. Structural model A with completely standardized regression paths.

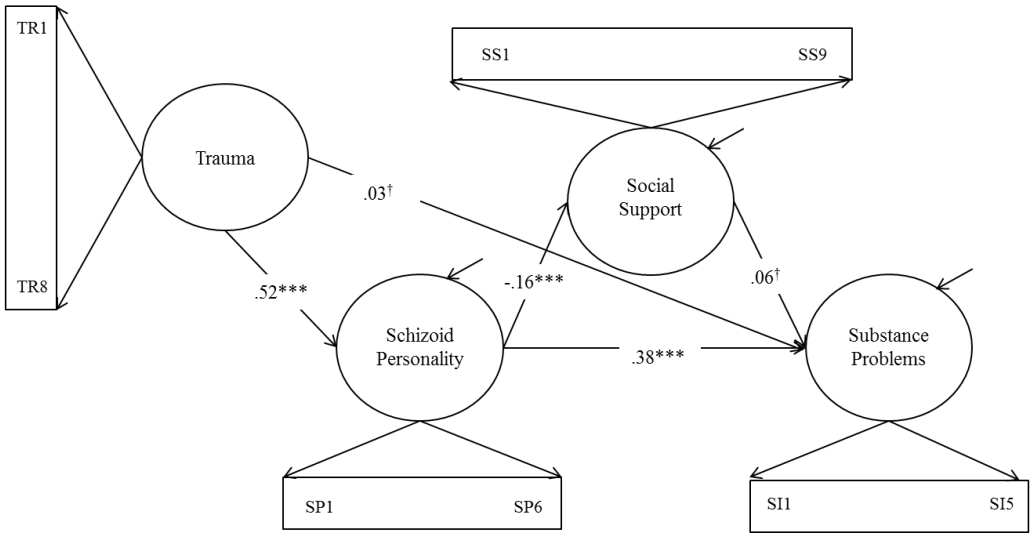

Figure 6. Structural model B with completely standardized regression paths.

Chapter V

Discussion

Schizoid personality disturbances are rarely addressed in outpatient research and treatment models. This study has provided empirical support for the link between traumatic experiences and schizoid symptoms, as well as for the relation between schizoid symptoms and substance problems. Moreover, results illuminated that social support was not a mediator for juveniles on probation with schizoid traits and substance problems.

Research Question One: How Were Strengths and Risks Related to Each Other and to Negative Outcomes?

It was hypothesized that trauma and schizoid personality would significantly and positively correlate with lifetime substance problems. This hypothesis was confirmed; trauma had a significant, positive correlation with substance problems indicating that higher levels of trauma (i.e., higher severity and different forms of abuse) were related to more substance problems. Schizoid personality was also positively and significantly correlated with the outcome. It was also hypothesized that social support would significantly and negatively correlate with lifetime substance problems and schizoid personality traits. Social support was not correlated with the outcome, but it was significantly and negatively correlated with schizoid personality traits. Overall, empirical support for the interrelations between risk and strength items and the outcome in this study was mixed. While the risks (trauma, schizoid personality) correlated with the strength (social support), social support did not correlate with the negative outcome (substance problems).

Research Question Two: Was the Four-Factor Model Adequate?

Another set of findings is related to the viability of the constructs of trauma, support, personality, and substance problems when applied to the youth offender population. Many of those constructs (i.e., trauma and social support) have been primarily employed with nonoffending youths or adults, so that it was important to test whether they would work equally well with this sample before moving into the structural model analysis. Results show that these constructs worked well for assessing personality and risk constructs among youths on probation, and that these constructs are interrelated in meaningful ways. This suggested that the subsequent analysis of direction and significance of the paths between them could be conducted.

Research Question Three: What Were the Relations Between Trauma, Schizoid Personality, Social Support, and Substance Problems?

The relations among the four constructs were examined. It was hypothesized that trauma would have a direct, positive, and significant effect on the development of schizoid personality traits. This hypothesis was confirmed. It was hypothesized that schizoid personality would negatively impact social support due to interpersonal difficulties that result in social withdrawal. This was confirmed by the significant, negative association schizoid personality had on social support. In other words, the more schizoid traits an adolescent endorsed, the less likely he was to have different types of support at school or home. It was also hypothesized that social support would decrease substance problems. This hypothesis was not confirmed. The path between social support and substance problems was positive and nonsignificant. That is, for this sample having access to more and different types of support ranging from school counselor to parents did not decrease AOD use. It was

hypothesized that schizoid personality would have a positive, direct, and significant effect on substance problems. This was confirmed because higher levels of schizoid traits predicted higher AOD use. Similarly, the hypothesis of trauma having an indirect, positive relationship with substance problems was confirmed. Trauma had an indirect, significant, positive association with substance problems providing evidence for the role of childhood abuse adversely affecting AOD use behaviors in adolescence. This effect was found for the trauma-schizoid pathway only but not for the trauma-schizoid-social support pathway. This implies that substance problems share a pathway with trauma and personality. As a consequence, the epidemiology of substance problems should encompass traumatic experiences as well as personality traits. The conceptualization of problematic underage AOD behaviors requires a multifaceted model that accounts for the association between intrapsychic factors and extrapsychic outcomes.

Research Question Four: Does Social Support Alleviate Negative Effects of Schizoid Traits on Substance Problems?

This study explored whether social support decreases the association of schizoid personality with substance problems. In the literature social support in the form of parental support was found to decrease adolescent substance use by instilling healthier coping mechanisms and better self-control (Wills & Cleary, 1996). The measure of social support used in this study did not focus on only one type of support but included a variety of sources to which youths have access; i.e., teachers, parents, friends at school, and friends at home as well as hobbies. Assessing different forms of support including instrumental and emotional support, the hypothesis was not confirmed. For individuals with schizoid traits having different sources of social support did not ameliorate the negative trajectories of childhood

trauma to substance problems. Particularly, social support did not act as a resilience factor in the trauma-schizoid-substance problems pathway.

Schizoid Personality

Over one third of the participants responded to items on the schizoid personality scale indicating that they did not care to be around people, and they did not feel emotional about people. Besides, twice as many reported not trusting most people, wanting to get even, and space out the world. These findings carry implications for counselors, as well as for probation officers, courts, and school personnel. The endorsement of several schizoid items clearly indicates a differentiated personality profile from the antisocial type. This overlooked type presents with a complex affective, cognitive, and behavioral profile that is shaped by past trauma and personality traits that require a special set of interventions. High levels of introversion, mistrust, and emotional detachment are qualitatively different from the emotional coldness of the so-called psychopath (Wymbs et al., 2012). A person with such a profile is likely to have a rich inner life created in an attempt to compensate for failed relationships with caregivers that is not accessed via conventional AOD treatment. Even though early traumatic experiences do not inevitably lead to personality disorders, they impact the way individuals see the world and others. Hence, assessing for personality traits should not be minimized to diagnostics, but serve the need for a greater understanding of the individual client.

Trauma

Research finds that relational trauma between child and caregiver has long-lasting effects on development (Schore, 2001). Childhood abuse is a risk factor for psychiatric disorders as it impacts the way individuals relate to others and the self (Schore, 2001). This is

because the experience of abuse becomes internalized psychologically and physiologically in the form of brain function (Schore, 2001). Research on childhood trauma indicates that physical, sexual, and emotional abuse are associated with interpersonal hostility, low self-esteem, inadequate social functioning, and lower use of social coping strategies (Rademaker, Vermetten, Geuze, Muilwijk, & Kleber, 2008). From an object relations perspective, schizoid traits are the result of post-natal failures of loving relationships in which a strong sense of self was prevented from unfolding (Guntrip, 1968).

Copious research has studied the relations trauma has with mental health and antisocial behaviors, such as substance abuse (National Child Traumatic Stress Network, 2004). Giaconia et al. (2000) found that as a result of affective, cognitive, and behavioral vulnerabilities trauma survivors are more likely to experience substance problems as well. This pathway was supported by the results of this study. This study also contributed an additional element, i.e., schizoid personality, into the conceptualization of the pathway between trauma and substance use. While schizoid traits in themselves are not pathological, having more of those traits in the context of trauma predicted substance problems. Hence, moving toward the higher end of the schizoid dimension poses a risk factor for problematic AOD use among youths who committed a crime, including trying to hide one's use, using substances more frequently, and annoying others with their use. Psychoanalytic accounts of schizoid personality state that underneath the expressions of indifference and emotional coldness is a hunger for love and intimacy, a hyper-reflectiveness about the self, and a curiosity about others (Akhtar, 1987). This may help to conceptualize the relationship between schizoid traits and substance problems when thinking of AOD use as a way to numb the potentially distressing, unmet needs for interpersonal connectedness.

Generally, results suggest that having experienced trauma in childhood is related to emotional detachment and psychological distress. This study was able to demonstrate that the effects of childhood trauma on personality can entail schizoid traits. Moreover, the alternative model demonstrated that when including personality in the model the direct effect between trauma and substance problems became nonsignificant, therefore providing empirical evidence for subsequent intrapsychic effects of trauma that led to maladjustment and not the occurrence of trauma per se. This corresponds to a resilience framework whereby maladjustment is not an irrevocable result but instead springs from the presence of additional risk factors (e.g., maladaptive personality traits) that may have emerged from the original trauma.

Resilience

This work contributed to the resilience literature by examining the role of social support for different populations and personality types. Resilience was included in this study to assess whether social support was a buffer between schizoid personality traits and substance use. Strengths of youths with a criminal record were included in this study in order to shift the focus from risks and deficits of the youths toward maintaining the complexity of youth offending behaviors. Juveniles with a criminal history reported a number of strengths, especially in the domains of family support. This has implications for treatment interventions that would ideally leverage on those strengths and include families more regularly. The important role of family in treatment of adolescents has been demonstrated in effectiveness studies of interventions like the A-CRA (McGarvey et al., 2014). Yet, caution is warranted when formulating social support as a universal protective factor against substance problems. Social support as measured in this study by the number of different types of support was not

found to be a protective factor against substance problems for individuals with schizoid personality traits. This could also imply that for individuals with schizoid traits social relationships and support are not as protective as are other, unstudied factors. It may be that for this personality type it is less about having access but more about how to access different support networks. These individuals may benefit from interventions that provide corrective emotional experiences of relatedness in a therapeutic setting lowering fear and distrust by the client in regard to his own needs.

Since the measure did not specify the nature of the social support, it could be that youths who committed crimes seek support from peers who are gang members or involved in delinquent activities themselves. Also, cultural factors may have influenced participants' responses to the social support measure so that for Latino males, for instance, affirmative responses to having social support may reflect their value of loyalty but not necessarily the presence of networks that help lower their personal distress. Social support is a multifaceted construct; it may be that it is a particular form of social support that is more effective than another for this population. Since the measure employed in the study grouped different types of social support together I was not able to test such a differential effect. The finding that schizoid personality traits had a negative relation with social support suggests that individuals with this personality type were, first of all, less likely to have different types of social support, and, second of all, may not benefit from treatment interventions emphasizing prosocial peer support in the same way other personality types do. This should be determined by future effectiveness studies that include personality type as a study variable. To my knowledge this study is one of the first empirical approaches to the developmental trajectory

between trauma, schizoid personality, and antisocial behaviors, i.e., substance problems, among youths on probation.

Even though the distinction resilience researchers draw between internal and external factors is helpful, it appears that risks like trauma and maladaptive personality traits carry both, internal and external implications for the individual simultaneously. For example, an individual high on schizoid traits is likely to experience interpersonal difficulties even though personality is an internal resilience factor. Similarly, when reviewing psychoanalytic concepts of object relations it becomes evident that a trauma history affects the individual on an internal and external level. In other words, a youth with a trauma history is more likely to experience internalizing disorders, such as depression and anxiety, and higher levels of mistrust and affect dysregulation which hinder interpersonal connections. As a result, the distinction between internal and external resilience factors is artificial when conceiving of the deeper-rooted processes involved. This study argues that its findings corroborate an alternate conceptualization of internal and external resilience factors (i.e., trauma, personality or ego strengths, social support and substance problems) not as distinct categories but as dualistic entities that represent both intra- and extrapsychic processes at once.

Substance Problems

As expected, substance use was reported by a high proportion of youths. Over 80% had reported using AOD weekly or more often at some point in their lives, and 71% had received complaints from parents about their AOD use. While AOD use is normative during adolescence, a high number of youths in the sample reported experiencing problems related to their use. It was found that trauma had a detrimental effect on substance use behaviors in a youth offender's life. Moreover, the study provided evidence for the relations between past

trauma, schizoid personality traits, and substance problems, indicating the importance of context whereby for one individual using substances recreationally may be normative, and for another it may be maladaptive. For example, when using drugs is motivated by an attempt at coping with previous trauma, intervention would be indicated. Additionally, if substance use, even if infrequent, is causing interpersonal difficulties in the youth's life, such as conflicts with family and friends, therapeutic intervention is recommended.

Clinical and Research Implications

Individuals cannot be expected to respond to and benefit from treatment interventions in the same way. Assessing for personality characteristics at the beginning of treatment has several important benefits that are likely to enhance treatment effectiveness. First, assessing for past traumatic experiences is important but not sufficient. Evidently, trauma effects the way children develop their way of thinking about themselves and others, which is associated with a relatively stable pattern of thinking, feeling, and behaving, i.e., personality (Allen & Lauterbach, 2007; Van Dijke, Ford, van Son, Frank, & van der Hart, 2013). This is not to say that trauma inevitably leads to maladaptive personality patterns, let alone personality disorders. Evidence suggests that many trauma survivors are resilient against long-term detrimental effects of abuse and develop adaptive personality traits (Paris, 1998). In order to individualize treatment and enhance its effectiveness, those patterns of thinking and feeling must be assessed and incorporated into treatment. Individuals who struggle with interpersonal connections cannot be expected to benefit from interventions that ask them to join a sports club, for example. Different personalities may use substances for different reasons and to fulfill different needs. Where an individual with schizoid tendencies uses

marijuana daily to cope with feelings of loneliness and emotional disconnect, someone with impulsive personality traits may use cocaine for a thrill.

Substance problems are an "equifinal" (Cicchetti & Rogosch, 2002, p. 11) outcome which means that there are different trajectories from early trauma to later substance use. Research on cannabis motives found that distinct personality profiles relate to AOD use (Hecimovic, Barrett, Darredeau, & Stewart, 2014). For example, anxiety sensitivity and introversion (i.e., hopelessness) motivated cannabis use as a way for coping with sad emotions and to help with socializing (Hecimovic et al., 2014). For individuals high on anxiety, cannabis was a means for an escape (Hecimovic et al., 2014). Thus, substance use may look the same across individuals; however, it is likely to be motivated by different needs. Where one person uses cannabis to forget, another may use it to feel more alive. Unless research addresses the complexity of substance use behaviors in individuals with different personalities treatment efforts are likely to be generic and ineffective.

When not correctly identified by clinicians and criminal justice personnel, individuals with schizoid personality traits may not have their treatment needs met. Hence, assessing for personality types is critical for treatment process and outcome because it allows for anticipating challenges and resistances. Moreover, the study showed that including personality as a factor when assessing youths who struggle with substance-related issues provides insight into their unique way of interacting with the world, which in turn has implications for treatment and recovery. Having a better understanding of the individual client will improve diagnostics and treatment planning. Hopefully, this in turn will create long-term benefits for the client.

Future Directions

Future research is needed to compare different personality types and their relationship to trauma and substance use. Are impulsive personalities more likely to benefit from social support as an intervention for substance use reduction? Since adolescence is a developmental construct that implies significant changes in personality and interpersonal behaviors, it will be important to consider grouping participants in different age clusters corresponding to early-, mid-, and late-adolescence or early adulthood, for example.

Since social support did not mediate the relation between schizoid personality and substance problems, research is needed to determine whether there are other protective factors that work for this specific personality type. Based on the characterological description of the schizoid personality type in the *DSM-IV-TR*, individuals on this personality dimension prefer solitary activities and have little interest in relationships (4th ed., text rev.; American Psychiatric Association, 2000). Thus, they may respond more favorably to interventions that suggest legal hobbies that do not involve large-group interactions. Females who engage in illegal activities have been underrepresented in the empirical literature and differ from males who offend (Dixon, Howie, & Starling, 2004). Future research should include female youths to explore their specific risk and protective factors and trajectories to antisocial behaviors. Likewise, differences of antisocial trajectories between ethnic or cultural groups should be examined. Research on ethnic identity and wellbeing found that there is an association of ethnic regard, which is defined as the degree to which one perceives one's ethnic group as positive, to overall happiness and lower anxiety levels (Kiang, Yip, Fuligni, Gonzales-Backen, & Witkow, 2006). Research needs to be conducted on whether trajectories from trauma to antisocial behaviors differ for youths who hold their ethnicity in high regard.

Another line of research that would add to the current understanding of substance use behaviors will be fulfilled through qualitative methods. Asking participants about what feelings they are trying to either avoid or have when using can provide critical nuances for understanding substance use. Learning about the motivation behind using is critical for developing healthier alternatives for those youths. Similarly, research is needed to help learn about the specific patterns of use related to cannabis versus other drugs. A lot of the research on drug use and treatment is based on adults using alcohol, heroin, or cocaine; current approaches would benefit from specific research efforts on youths and their cannabis use (Dennis et al., 2002). Analyzing whether trajectories differ by drug type across personality types will help adapt substance abuse interventions and foster greater flexibility in treatment. Additionally, qualitative approaches will be able to access the nature of different types of support, what kinds of needs they fulfill, and what they mean to the individual. Previous research found teachers to provide informational support, whereas peers provided informational and emotional support (Hombrados-Mendieta, Gomez-Jacinto, Dominguez-Fuentes, Garcia-Leiva, & Castro-Travé, 2012). Semi-structured interviews will be able to address whether a caregiver or family member is fulfilling a different need than a gang member. Is the former addressing a practical or informational need, and the latter an emotional one during adolescence? What needs do different types of support fulfill? What needs are there that may not yet have been assessed or studied? And what differential effects do different types of support have on rehabilitation for youths on probation?

Study Limitations

This study has several limitations. First, I did not control for some potentially confounding variables. Indeed, genetic predispositions and the presence of neighborhood and

domestic violence have been linked to trauma and the development of antisocial behaviors (Maschi et al., 2008), so that statistical conclusion validity may have been compromised. Moreover, the trauma measure did not exclude recent traumatic experiences that occurred during adolescence. If traumatic experiences occurred close to when measured in the adolescent sample they were unlikely to have shaped personality traits. Another limitation refers to the measure of schizoid personality that did not prevent nonschizoid traits from being included. For example, the CPI measure consisted of traits that are shared with paranoid, antisocial, and borderline personality types potentially limiting statistical conclusion validity. However, the idea of shared traits across different categorizations of personality is state-of-the-art in current personality research, and has informed revisions of diagnostic instruments like the *DSM-V* (5^{th} ed.; American Psychiatric Association, 2013). Therefore, dimensional constructs of personality may provide a more accurate representation of personality, so that the CPI measure, by being inclusive of overlapping traits across categories, may have been an enhancement of construct validity instead of a detriment.

Because all measures relied on self-report increasing mono-method bias, a potential threat for construct validity exists. In futures studies parental or friend reports on youths may help alleviate this problem. Potentially, observational data on interpersonal behaviors can augment creation of personality profiles in the future. This study did not implement an experimental design that manipulates the independent variable, which may have compromised internal validity (Heppner, Wampold, & Kivlighan, 2008). Similarly, participants were not sampled randomly but were part of a youth offender reentry grant. This makes it likely that the participants shared some preexisting differences causing selection bias. Therefore, findings should not be generalized to youths in the community who were not arrested for illegal

behaviors and do not share some of the main characteristics of the sample. Another limitation is due to the lack of covariates in the study. In order to best recreate the complexity of individual AOD users, it would be helpful to account for concurrent existing levels of depression and anxiety, for example. Finally, since the social support variable measured different types of social support that could include talking with a peer while high on drugs, it may have confounded prosocial aspects of support with antisocial ones. This would have had an impact on the validity of that measure for assessing positive social support. Moreover, since the measure captured quantity and not quality of social supports, I was unable to differentiate effects between different peer and adult support, for example.

Conclusion

Research suggests that adolescent substance problems present a risk for a variety of maladaptive behaviors (Cook et al., 2006; Skeer, McCormick, Normand, Buka, & Gilman, 2009). Clearly, for youths with a criminal history rehabilitating from previous criminal activity will be substantially influenced by their ability to stay clean and sober. The study's findings illustrate the complexity of youth offending behaviors and the role that extrapsychic (social support, trauma) and intrapsychic (schizoid traits) factors play in overall functioning. Results demonstrate that child maltreatment is a risk factor, not only for adolescent substance use, but for developing internalizing personality traits of schizoid character. It is important to note that substance problems occurred in relation to a traumatic experience and not a diagnosis of PTSD. Hence, treatment providers should consider assessing for and treating trauma even in the absence of a diagnosis when adverse effects on personality development are suspected. Individuals with schizoid traits need specific interventions to foster resilience against substance use problems. Unless the understanding of individual differences of

relating to the world and the self advances, treatments will miss the opportunity to facilitate long-lasting behavioral changes. The quiet ones, those who feel left out and apart, must not be overlooked in our attempts to help and intervene where indicated. Even though they may be content with us leaving them alone, we need to give them a voice by dedicating research and resources to their wellbeing.

References

Abram, M., Teplin, L. A., Charles, D. R., Longworth, S. L., McClelland, G. M., & Dulcan, M. K. (2004). Posttraumatic stress disorder and trauma in youth in juvenile detention. *Archives of General Psychiatry, 61*, 403-410. Retrieved from http://archpsyc.jamanetwork.com/journal.aspx

Acuña, E., & Rodriguez, C. (2004). The treatment of missing values and its effect on classifier accuracy. In D. Banks, L. House, McMorris, F. R., Arabie, P., & W. Gaul (Eds.), *Classification, clustering, and data mining applications* (pp. 639 – 648). New York, NY: Springer-Verlag.

Akhtar, S. (1987). Schizoid personality disorder: a synthesis of developmental, dynamic, and descriptive features. *American Journal of Psychotherapy, 41*(4), 499-518. Retrieved from http://www.ajp.org

Allen, B., & Lauterbach, D. (2007). Personality characteristics of adult survivors of childhood trauma. *Journal of Traumatic Stress, 20*(4), 587-595. doi: 10.1002/jts.20195

American Academy of Child and Adolescent Psychiatry. (July, 2013). *Facts for families: marijuana and teens* (No. 106). Retrieved from http://www.aacap.org/App_Themes/AACAP/docs/facts_for_families/106_marijuana_and_teens.pdf

American Psychiatric Association. (1968). *Diagnostic and statistical manual of mental disorders* (2nd ed.). Arlington, VA: American Psychiatric Association.

American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., text rev.). Arlington, VA: American Psychiatric Association.

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Arlington, VA: American Psychiatric Association.

Armstrong, T. D., & Costello, E. J. (2002). Community studies on adolescent substance use, abuse, or dependence and psychiatric comorbidity. *Journal of Consulting and Clinical Psychology, 70*(6), 1224-1239. doi: 10.1037//0022-006X.70.6.1224

Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic and statistical considerations. *Journal of Personality and Social Psychology, 51*, 1173-1182. Retrieved from http://www.apa.org/pubs/journals/psp/index.aspx

Benjamin, L. S. (1996). *Interpersonal diagnosis and treatment of personality disorders* (2nd ed.). New York, NY: Guilford Press.

Bentler, P. M. (1990). Comparative fit indexes in structural models. *Psychological Bulletin, 107*, 238–246. doi:10.1037/0033-2909.107.2.238

Berenbaum, H., Thompson, R. J., Milanak, M. E., Boden, M. T., & Bredemeier, K. (2008). Psychological trauma and schizotypal personality disorder. *Journal of Abnormal Psychology, 117*(3), 502-519. doi: 10.1037/0021-843X.117.3.502

Bernstein, D. P., Stein, J. A., & Handelsman, L. (1998). Predicting personality pathology among adult patients with substance use disorders: effects of childhood maltreatment. *Addictive Behaviors, 6*, 855-868. Retrieved from http://www.journals.elsevier.com/addictive-behaviors

Bierer, L. M., Yehuda, R., Schmeidler, J., Mitropoulou, V., New, A. S., Silverman, J. M., & Siever, L. J. (2003). Abuse and neglect in childhood: relationship to personality disorder diagnoses. *CNS Spectrums, 8*(10), 749-754. Retrieved from http://www.

cnsspectrums.com

Block, J. H., & Block, J. (1980).The role of ego-control and ego-resiliency in the organization of behavior. In W. A. Collins (Ed.), *Minnesota Symposium on Child Psychology* (pp.13, 39-101). Hillsdale, NJ: Erlbaum.

Block, J., & Block, J. H. (2006). Venturing a 30-year longitudinal study. *American Psychologist, 61,* 315–327. doi: 10.1037/0003-066X.61.4.315

Born, M., Chevalier, V., & Humblet, I. (1997). Resilience, desistance and delinquent career of adolescent offenders. *Journal of Adolescence, 20,* 679–694. Retrieved from http://www.journals.elsevier.com/journal-of-adolescence/

Bowers, E. P., Gestsdottir, S., Geldhof, G. J., Nikitin, J., Von Eye, A., & Lerner, R. M. (2011). Developmental trajectories of intentional self regulation in adolescence: the role of parenting and implications for positive and problematic outcomes among diverse youth. *Journal of Adolescence, 34,* 1193-1206. doi: 10.1016/j.adolescnce. 2011.07.006

Brown, T. A. (2006). *Confirmatory factor analysis for applied research*. New York, NY: Guilford Press.

Buckner, J. C., Mezzacappa, E., & Beardslee, W. R. (2003). Characteristics of resilient youths living in poverty: the role of self-regulatory processes. *Development and Psychopathology, 15,* 139-162. doi: 10.1017.S0954579403000087

California Department of Corrections and Rehabilitation. (2010). *Juvenile Justice Outcome Evaluation Report: Youth Released from the Division of Juvenile Justice in Fiscal Year 2004-05*. Retrieved from http://www.cdcr.ca.gov/Reports_Research/docs/ Recidivism%20Report.FY0405.%20FINAL.DJJ.pdf

Carr, M. B., & Vandiver, T.A. (2001). Risk and protective factors among youth offenders. *Adolescence, 36*(143), 409-426. Retrieved from http://www.vjf.cnrs.fr/clt/php/va/Page_revue.php?ValCodeRev=ADO

Cicchetti, D., & Rogosch, F. A. (1997). The role of self-organization in the promotion of resilience in maltreated children. *Development and Psychopathology, 9*, 797-815. Retrieved from http://journals.cambridge.org/action/displayJournal?jid=DPP

Cicchetti, D., & Rogosch, F. A. (2002). A developmental psychopathology perspective on adolescence. *Journal of Consulting and Clinical Psychology, 70*(1), 6-20. doi: 10.1037//0022-006X.70.1.6

Cook R. L., Comer D. M., Wiesenfeld H. C., Chang C. C., Tarter R., Lave J. R., & Clark D. B. (2006). Alcohol and drug use and related disorders: An underrecognized health issue among adolescents and young adults attending sexually transmitted disease clinics. *Sexually Transmitted Diseases, 33*(9), 565 –570. doi: 10.1097/01.olq.0000206422.40319.54

Costa, Jr., P. T., & McCrae, R. R. (1992). *Revised NEO Personality Inventory (NEO-PI-R) and NEO Five-Factor Inventory (NEO-FFI)*. Odessa, FL: Psychological Assessment Resources, Professional Manual.

Creswell, J. W., & Clark, V. L. (2007). *Designing and conducting mixed methods research*. Thousand Oaks, CA: Sage.

Curran, P. J., West, S. G., & Finch, J. F. (1996). The robustness of test statistics to nonnormality and specification error in confirmatory factor analysis. *Psychological Methods, 1*, 16-29. doi: 10.1037/1082-989X.1.1.16

Dass-Brailsford, P., & Myrick, A. C. (2010). Psychological trauma and substance abuse:

the need for an integrated approach. *Trauma, Violence, & Abuse, 11*(4), 202-213. doi: 10.1177/1524838010381252

Daud, A., Klinteberg, B. A., & Rydelius, P.-A. (2008). Trauma, PTSD and personality: the relationship between prolonged traumatization and personality impairments. *Scandinavian Journal of Caring Sciences, 22*, 331-340. doi: 10.1111/j.1471-6712. 2007.00532.x

Dekovic, M. (1999). Risk and protective factors in the development of problem behavior during adolescence. *Journal of Youth and Adolescence, 28*(6), 667- 413. Retrieved from http://www.springer.com/psychology/child+%26+school+psychology/journal/ 10964

Dennis, M., Godley, S. H., Diamond, G., Tims, F. M., Babor, T., Donaldson, J., Liddle, H., Titus, J. C., Kaminer, Y., Webb, C., Hamilton, N., & Funk, R. (2004). The cannabis youth treatment (CYT) study: main findings from two randomized trails. *Journal of Substance Abuse Treatment, 27*, 197-213. Retrieved from http://www.journals. elsevier.com/journal-of-substance-abuse-treatment/

Dennis, M., Titus, J. C., Diamond, G., Donaldson, J., Godley, S. H., Tims, F. M., Webb, C., Kaminer, Y., Babor, T., Roebuck, M. C., Godley, M. D., Hamilton, N., Liddle, H., Scott, C. K. , & C.Y.T. Steering Committee. (2002). The cannabis youth treatment (CYT) experiment: rationale, study design and analysis plans. *Addiction, 97* (Suppl. 1), 16-34. Retrieved from http://www.addictionjournal.org/

Dennis, M., White, M., & Titus, J. C., & Unsicker, M. S. (2008). *Global Appraisal of Individual Needs: administration guide for the GAIN and related measures* (version 5). Retrieved from Chestnut website http://www.gaincc.org/_data/files/Instruments

%20and%20Reports/Instruments%20Manuals/GAIN-I%20manual_combined_0512.pdf

Dixon, A., Howie, P., & Starling, J. (2004). Psychopathology in female juvenile offenders. *Journal of Child Psychology and Psychiatry, 45*(6), 1150-1158. Retrieved from http://onlinelibrary.wiley.com/journal/10.1111/%28ISSN%291469-7610

Drake, R. E., Mueser, K. T., Clark, R. E., & Wallach, M. A. (1996). The course, treatment, and outcome of substance disorder in persons with severe mental illness. *American Journal of Orthopsychiatry, 66*(1), 42-51. Retrieved from http://onlinelibrary.wiley.com/journal/10.1111/%28ISSN%291939-0025

DuBois, D. L., Burk-Braxton, C., Swenson, L. P., Tevendale, H. D., Lockerd, E. M., & Moran, B. L. (2002). Getting by with a little help from self and others: self-esteem and social support as resources during early adolescence. *Developmental Psychology, 38*(5), 822-839. doi: 10.1037//0012-1649.38.5.822

Emsley, R., Dunn, G., & White, I. R. (2010). Mediation and moderation of treatment effects in randomised controlled trials of complex interventions. *Statistical Models in Medical Research, 19*, 237-270. doi: 10.1177/0962280209105014

Erikson, E. H. (1968). *Identity: youth and crisis*. New York, NY: W. W. Norton & Company.

Fairbairn, W. R. D. (1952). *Psychoanalytic studies of the personality*. New York, NY: Routledge.

Fergusson, D. M., & Lynskey, M. T. (1996). Adolescent resiliency to family adversity. *Journal of Child Psychology and Psychiatry, 37*(3), 281-292. Retrieved from http://onlinelibrary.wiley.com/journal/10.1111/%28ISSN%291469-7610

Finn, P. R. (2002). Motivation, working memory, and decision making: a cognitive-motivational theory of personality vulnerability to alcoholism. *Behavioral and Cognitive Neuroscience Review, 1,* 183-205. doi: 10.1177/1534582302001003001

Fleuriet, K. J. (2009). Problems in the Latina paradox: measuring social support for pregnant immigrant women from Mexico. *Anthropology & Medicine, 16*(1), 49-59. doi: 10.1080/13648470802425989

Flores, P. J. (2004). *Addiction as an attachment disorder*. Lanham, MD: Rowman & Littlefield.

Flores, E., Cicchetti, D., & Rogosch, A. (2005). Predictors of resilience in maltreated and nonmaltreated Latino children. *Developmental Psychology, 41*(2), 338-351. doi: 10.1037/0012-1649.41.2.338

Flory, K., Lynam, D., Milich, R., Leukefeld, C., & Clayton, R. (2002) The relations among personality, symptoms of alcohol and marijuana abuse, and symptoms of comorbid psychopathology: results from a community sample. *Experimental and Clinical Psychopharmacology, 10*(4), 425-434, doi: 10.1037//1064-1297.10.4.425

Fonagy, P., Gergely, G., Jurist, E., & Target, M. (2002). *Affect regulation, mentalization, and the development of the self*. New York, NY: Other Press.

Franken, I. H. A., & Hendriks, V. M. (2000). Early-onset of illicit substance use is associated with greater axis-II comorbidity, not with axis-I comorbidity. *Drug and Alcohol Dependence, 59,* 305-308. Retrieved from http://www.journals.elsevier.com/drug-and-alcohol-dependence/

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*, 359 – 375. doi: 10.1111/j.1469-7610.2007.01862.x

GAIN Coordinating Center. (2011). *GAIN-I encyclopedia of supplemental documentation on scales and other calculated variables* (version 5.6) [Code book]. Retrieved from http://www.gaincc.org/_data/files/Psychometrics_and_Publications/Resources/GAIN-I_Scales_and_Variables.xls

Garner, B. R., Godley, S. H., & Funk, R. R. (2008). Predictors of early therapeutic alliance among adolescents in substance abuse treatment. *Journal of Psychoactive Drugs, 40*(1), 55-65. doi: 10.1080/02791072.2008.10399761

Gfellner, B. M., & Armstrong, H. D. (2012). Ego development, ego strengths, and ethnic identity among first nation adolescents. *Journal of Research on Adolescence, 22*(2), 225-234. doi: 10.1111/j.1532-7795.2011.00769.x

Giaconia, R. M., Reinherz, H. Z., Hauf, A. C., Paradis, A. D., Wasserman, M. S., & Langhammer, D. M. (2000). Comorbidity of substance use and posttraumatic stress disorders in a community sample of adolescents. *American Journal of Orthopsychiatry, 70*(2), 253-262. Retrieved from http://onlinelibrary.wiley.com/journal/10.1111/%28ISSN%291939-0025

Gilbert, P., Allan, S., & Goss, K. (1996). Parental representations, shame, interpersonal problems and vulnerability to psychopathology. *Clinical Psychology and Psychotherapy, 3*, 23-34. Retrieved from http://onlinelibrary.wiley.com/journal/10.1002/(ISSN)1099-0879

Glueck, S., & Glueck, E. (1950). *Unraveling juvenile delinquency*. Cambridge, MA: Harvard University Press.

Godley, S. H., Meyers, R. J., Smith, J. E., Karvinen, T., Titus, J. C., Godley, M. D., Dent, G., Passetti, L., & Kelberg, P. (2001). *The adolescent community reinforcement approach for adolescent cannabis users: cannabis youth treatment (CYT) series* (Vol. 4, DHHS Pub. No. 01-3489). Retrieved from http://www.chestnut.org/Portals/14/PDF_ Documents/Lighthouse/CYT/Products/ACRA_CYT_v4.pdf

Goldstein, N. E. S., Olubadewo, S., Redding, R., & Lexcen, F. (2005). Mental health disorders: The neglected risk factor in juvenile delinquency. In K. S. Heilbrun, N. E. S. Goldstein, & R. E. Redding (Eds.), *Juvenile delinquency: Prevention, assessment, and intervention* (pp. 85-110). New York: Oxford University Press.

Gorka, S. M., Shankman, S. A., Seeley, J. R., & Lewinsohn, P. M. (2013). The moderating effect of parental illicit substance use disorders on the relation between adolescent depression and subsequent illicit substance use disorders. *Drug and Alcohol Dependence, 128*, 1-7. Retrieved from http://www.journals.elsevier.com/drug-and-alcohol-dependence/

Graña, J. L., Muñoz, J. J., & Navas, E. (2009). Normal and pathological personality characteristics in subtypes of drug addicts undergoing treatment. *Personality and Individual Differences, 46*, 418–423. doi:10.1016/j.paid.2008.11.011

Grant, B. F., Hasin, D. S., Stinson, F. S., Dawson, D. A., Chou, S., P., Ruan, W. J., & Pickering, R. P. (2004). Prevalence, correlates, and disability of personality disorders in the United States: results from the National Epidemiologic Survey on Alcohol and Related Conditions. *Journal of Clinical Psychiatry, 65*(7), 948-958. doi: 10.4088/JC

P.v65n0711

Grella, C. E., Stein, J. A., & Greenwell, L. (2005). Associations among childhood trauma, adolescent problem behaviors, and adverse adult outcomes in substance-abusing women offenders. *Psychology of Addictive Behaviors, 19*(1), 43-53. doi*:* 10.1037/0893-164X.19.1.43

Grisso, T. (2005). Why we need mental health screening and assessment in juvenile justice programs. In T. Grisso, G. Vincent, & D. Seagrave (Eds.), *Mental health screening and assessment in juvenile justice* (pp. 3-21). New York, NY: Guilford Press.

Guerra, N. G., Williams, K. R., Tolan, P. H., & Modecki, K. L. (2008). Theoretical and research advances in understanding the cause of juvenile offending. In N. G. Guerra, R. D. Hoge, & P. Boxer (Eds.), *Treating the juvenile offender* (pp. 33-54). New York, NY: Guilford Press.

Gunn, R. L., Finn, P. R., Endres, M. J., Gerst, K. R., & Spinola, S. (2013). Dimensions of disinhibited personality and their relation with alcohol use and problems. *Addictive Behaviors, 38*(7), 2352-60. doi: 10.1016/j.addbeh.2013.02.009

Guntrip, H. (1968). *Schizoid phenomena, object-relations, and the self*. New York, NY: International Universities Press.

Hall, W. D., & Lynskey, M. (2005). Is cannabis a gateway drug? Testing hypotheses about the relationship between cannabis use and the use of other illicit drugs. *Drug and Alcohol Review, 24*, 39 – 48. doi: 10.1080/09595230500126698

Harley, K., & Eskenazi, B. (2006). Time in the United States, social support and health behaviors during pregnancy among women of Mexican descent. *Social Science & Medicine, 62*(12), 3048-3061. doi: 10.1016/j.socscimed.2005.11.036

Hawkins, J. D., Catalano, R. F., & Miller, J. Y. (1992). Risk and protective factors for alcohol and other drug problems in adolescence and early adulthood: implications for substance abuse prevention. *Psychological Bulletin, 112*(1), 64-105. Retrieved from http://www.apa.org/pubs/journals/bul/

Hecimovic, K., Barrett, S. P., Darredeau, C., & Stewart, S. H. (2014). Cannabis use motives and personality risk factors. *Addictive Behaviors, 39*, 729-732. Retrieved from http://www.journals.elsevier.com/addictive-behaviors/

Helsen, M., Vollebergh, W., & Meeus, W. (2000). Social support from parents and friends and emotional problems in adolescence. *Journal of Youth and Adolescence, 29*(3), 319-335. Retrieved from http://www.springer.com/psychology/child+%26+school+psychology/journal/10964

Henry, K. L., Oetting, E. R., & Slater, M. D. (2009). The role of attachment to family, school, and peers in adolescents' use of alcohol: a longitudinal study of within-person and between-persons effects. *Journal of Counseling Psychology, 56*(4), 564-572. doi: 10.1037/a0017041

Heppner, P. P., Wampold, B. E., & Kivlighan, Jr., D. M. (2008). *Research design in counseling: research, statistics, and program evaluation (3rd* ed.). Belmont, CA: Thomson Brooks/Cole.

Hombrados-Mendieta, M. I., Gomez-Jacinto, L., Dominguez-Fuentes, J. M., Garcia-Leiva, P., & Castro-Travé, M. (2012). Types of social supported provided by parents, teachers, and classmates during adolescence. *Journal of Community Psychology, 40*(6), 645-664. doi: 10.1002/jcop

Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling, 6*(1), 1-55. doi: 10.1080/10705519909540118

Hunt, G. P., & Laidler, K. J. (2001). Alcohol and violence in the lives of gang members. *Alcohol Research & Health, 25*(1), 66-71. Retrieved from http://www.niaaa.nih.gov/

Hyer, L., Davis, H., Albrecht, W., Boudewyns, P., & Woods, G. (1994). Cluster analysis of MCMI and MCMI-II on chronic PTSD victims. *Journal of Clinical Psychology, 50,* 502–515. Retrieved from http://onlinelibrary.wiley.com/journal/10.1002/%28ISSN%291097-4679

Jaffee, S. R., Strait, L. B., & Odgers, C. L. (2012). From correlates to causes: can quasi-experimental studies and statistical innovations bring us closer to identifying the causes of antisocial behavior? *Psychological Bulletin, 138*(2), 272-295. doi: 10.1037/a0026020

Johnson, J. G., Cohen, P., Smailes, E. M., Skodol, A. E., Brown, J., & Oldham, J. M. (2001). Childhood verbal abuse and risk for personality disorders during adolescence and early adulthood. *Comprehensive Psychiatry, 42*(1), 16-23. Retrieved from http://www.journals.elsevier.com/comprehensive-psychiatry/

Kathib, J., Bhui, K., & Stansfeld, S. A. (2013) Does social support protect against depression & psychological distress? Findings from the RELACHS study of East London adolescents. *Journal of Adolescence, 36,* 393-402. Retrieved from http://www.journals.elsevier.com/journal-of-adolescence/

Khoury, L., Tang, Y. L., Bradley, B., Cubells, J. F., & Ressler, K. J. (2010). Substance use, childhood traumatic experience, and posttraumatic stress disorder in an urban civilian

population. *Depression and Anxiety*, *27*, 1077-1086. Retrieved from http://onlinelibrary.wiley.com/journal/10.1002/%28ISSN%291520-6394

Kia-Keating, M., Dowdy, E., Morgan, M. L., & Noam, G. G. (2011). Protecting and promoting: An integrative conceptual model for healthy development of adolescents. *Journal of Adolescent Health*, *48*(3), 220-228. doi: 10.1016/j.jadohealth. 2010.08.006

Kiang, L., Yip, T., Fuligni, A. J., Gonzales-Backen, M., & Witkow, M. (2006). Ethnic identity and daily psychological well-being of adolescents from Mexican and Chinese backgrounds. *Child Development, 77*, 1338-1350. doi: 10.1111/j.1467-8624. 2006.00938.x

Kline, R. B. (2011). *Principles and practice of structural equation modeling* (3rd ed.). New York, NY: Guilford Press.

Kohut, H. (1977). *The restoration of the self*. New York, NY: International Universities Press.

Krueger, R. F., Hicks, B. M., Patrick, C. J., Carlson, S. R., Iacono, W. G., & McGue, M. (2002). Etiologic connections among substance dependence, antisocial behavior and personality: modeling the externalizing spectrum. *Journal of Abnormal Psychology, 111*, 411 - 424. doi: 10.1037//0021-843X.111.3.411

Le, T. N., & Stockdale, G. (2008). Acculturative dissonance, ethnic identity, and youth violence. *Cultural Diversity and Ethnic Minority Psychology*, *14*(1), 1-9. doi: 10.1037 /1099-9809.14.1.1

Libby, A. M., Orton, H. D., Stover, S. K., & Riggs, P. D. (2005). What came first, major depression or substance use disorder? Clinical characteristics and substance use

comparing teens in a treatment cohort. *Addictive Behaviors, 30,* 1649-1662. Retrieved from http://www.journals.elsevier.com/addictive-behaviors/

Löffler-Stastka, H., Szerencsics, M., & Blüml, V. (2009). Dissociation, trauma, affect regulation and personality in patients with a borderline personality organization. *Bulletin of the Menninger Clinic, 73*(2), 81-98. Retrieved from http://www.menningerclinic.com/research/bulletin

Loza, W., & Hanna, S. (2006). Is schizoid personality a forerunner of homicidal or suicidal behavior? A case study. *International Journal of Offender Therapy and Comparative Criminology, 50*(3), 338-343. Retrieved from http://ijo.sagepub.com/

Luthar, S. S., & Cicchetti, D. (2000). The construct of resilience: implications for interventions and social policies. *Development and Psychopathology, 12*(4), 857-885. Retrieved from http://journals.cambridge.org/action/displayJournal?jid=DPP

Markstrom, C. A., & Marshall, S. K. (2007). The psychosocial inventory of ego strengths: examination of theory and psychometric properties. *Journal of Adolescence, 30,* 63-79. doi: 10.1016/j.adolescence.2005.11.003

Martens, W. H. J. (2005). Multidimensional model of trauma and correlated personality disorder. *Journal of Loss and Trauma: International Perspectives on Stress & Coping, 10*(2), 115-129. doi: 10.1080/15325020590908821

Maschi, T. (2006). Trauma and violent delinquent behavior among males: the moderating role of social support. *Stress, Trauma, and Crisis: An International Journal, 9*(1), 45-72. doi: 10.1080/15434610500506233

Maschi, T., Bradley, C. A., & Morgen, K. (2008). Unraveling the link between trauma and delinquency: the mediating role of negative affect and delinquent peer exposure. *Youth Violence and Juvenile Justice, 6*(2), 136-157. doi: 0.1177/1541204007305527

Mason, W. A. Hitchings, J. E., & Spoth, R. (2007). Emergence of delinquency and depressed mood throughout adolescence as predictors of late adolescent problem substance use. *Psychology of Addictive Behaviors, 21*(1), 13-24. doi: 10.1037/0893-164X.21.1.13

Mauricio, A. M., Little, M., Chassin, L., Knight, G. P., Piquero, A. R., Losoya, S. H., & Vargas-Chanes, D. (2009). Juvenile offenders' alcohol and marijuana trajectories: risk and protective factor effects in the context of time in a supervised facility. *Journal of Youth and Adolescence, 38*, 440-453. doi: 10.1007/s10964-008-9324-5

McCrae, R. R., & Costa, P. T. (1997). Personality trait structure as a human universal. *American Psychologist, 52*(2), 509-516. Retrieved from http://www.apa.org/pubs/journals/amp/

McGarvey, E. L., Leon-Verdin, M., Bloomfield, K., Wood, S., Winters, E., & Smith, J. (2014). Effectiveness of A-CRA/ACC in treating adolescents with cannabis-use disorders. *Community Mental Health Journal, 50*, 150-157. doi: 10.1007/s10597-012-9566-2

McWilliams, N. (1999). *Psychoanalytic case formulation*. New York, NY: Guilford Press.

McWilliams, N. (2011). *Psychoanalytic diagnosis*. New York, NY: Guilford Press.

Miller, M. W., Greif, J. L., & Smith, A. A. (2003). Multidimensional personality questionnaire profiles of veterans with traumatic combat exposure: externalizing and internalizing subtypes. *Psychological Assessment, 15*(2), 205-215. doi: 10.1037/1040-3590.15.2.205

Moffitt, T. E., Caspi, A., Harrington, H., & Milne, B. J. (2002). Males on the life-course-persistent and adolescence-limited antisocial pathways: Follow-up at age 26 years. *Development and Psychopathology, 14*, 179–207. Retrieved from http://journals.cambridge.org/action/displayJournal?jid=DPP

Morrison, A. P. (1984). Shame and the psychology of the self. In P. E. Stepansky & A. I. Goldberg (Eds.), *Kohut's legacy: Contributions to self psychology* (pp. 71-93). Hillsdale, NJ: Analytic Press.

Morrison, G. M., Robertson, L., Laurie, B., & Kelly, J. (2002). Protective factors related to antisocial behavior trajectories. *Journal of Clinical Psychology*, *58*(3), 277–290. doi: 10.1002/jclp.10022

Mouttapa, M., Watson, D. W., McCuller, W. J., Sussman, S., Weiss, J. W., Reiber, C., Lewis, D., & Tsai W. (2010). I'm mad and I'm bad: links between self-identification as a gangster, symptoms of anger, and alcohol use among minority juvenile offenders. *Youth Violence and Juvenile Justice, 8*, 71-82. doi: 10.1177/1541204009339008

Mulvey, E. P., Schubert, C. A., & Chassin, L. (2010, December). Substance use and delinquent behavior among serious adolescent offenders. *Juvenile Justice Bulletin*, Retrieved from https://www.ncjrs.gov/pdffiles1/ojjdp/232790.pdf

Muthén, L. K., & Muthén, B. O. (1998-2010). *Mplus user's guide* (5th ed.). Los Angeles, CA: Muthén & Muthén.

Najavits, L. M., Weiss, R. D., & Shaw, S. R. (1997). The link between substance abuse and posttraumatic stress disorder in women: a research review. *The American Journal on Addictions*, *6*(4), 273-283. Retrieved from http://onlinelibrary.wiley.com/journal/10.1111/%28ISSN%291521-391;jsessionid=637B3936A18E9E1BDB7E2F5510293

162.d03t03?systemMessage=Wiley+Online+Library+will+be+disrupted+on+26+May+from+10%3A00-12%3A00+BST+%2805%3A00-07%3A00+EDT%29+for+essential+maintenance

National Child Traumatic Stress Network, Juvenile Justice Working Group. (2004). *Victimization and juvenile offending*. The National Child Traumatic Stress Network. Retrieved from http://www.nctsnet.org/nctsn_assets/pdfs/edu_materials/victimization_juvenile_offending.pdf

Nilsen, W., Karevold, E., Røysamb, E., Gustavson, K., & Mathiesen, K. S. (2013). Social skills and depressive symptoms across adolescence: social support as a mediator in girls versus boys. *Journal of Adolescence, 36,* 11-20. Retrieved from http://www.journals.elsevier.com/journal-of-adolescence/

Oshri, A., Rogosch, F. A., Burnette, M. L., & Cicchetti, D. (2011). Developmental pathways to adolescent cannabis abuse and dependence: child maltreatment, emerging personality, and internalizing versus externalizing psychopathology. *Psychology of Addictive Behaviors, 25*(4), 634-644. doi: 10.1037/a0023151

Paris, J. (1998). Does childhood trauma cause personality disorders in adults? *The Canadian Journal of Psychiatry*, *43*(2), 148-53. Retrieved from http://publications.cpa-apc.org/browse/sections/0

Puzzanchera, C., Adams, B., & Kang, W. (2012). *Easy Access to FBI Arrest Statistics 1994-2009*. Retrieved from Office of Juvenile Justice and Delinquency Prevention website: http://www.ojjdp.gov/ojstatbb/ezaucr/

Rademaker, A. R., Vermetten, E., Geuze, E., Muilwijk, A., & Kleber, R. J. (2008). Self-reported early trauma as a predictor of adult personality: a study in a military sample. *Journal of Clinical Psychology, 64*(7), 863-875. doi: 0.1002/jclp.20495

Raykov, T., & Marcoulides, G. A. (2006). *A first course in structural equation modeling* (2nd ed.). Mahwah, NJ: Lawrence Erlbaum.

Redding, R. E., Goldstein, N. E. S., & Heilbrun, K. (2005). Juvenile delinquency: past and present. In K. Heilbrun, N. E. S. Goldstein, & R. E. Redding, (Eds.), *Juvenile delinquency: Prevention, assessment, and intervention* (pp. 3-18). New York: Oxford University Press.

Rogosch, F. A., & Cicchetti, D. (2005). Child maltreatment, attention networks, and potential precursors to borderline personality disorder. *Development and Psychopathology, 17*(4), 1071-1089. doi: http://dx.doi.org/10.1017/S0954579405050509

Rosenberg, H. J., Vance, J., Rosenberg, S. D., Wolford, G. L., Ashley, S., W., & Howard, M. L. (2013). Trauma exposure, psychiatric disorders, and resiliency in juvenile-justice-involved youth. *Psychological Trauma: Theory, Research, Practice, and Policy*. Advance online publication. doi:10.1037/a0033199

Sanderson, M., Coker, A. L., Roberts, R. E., Torolero, S. R., & Reininger, B. M. (2004). Acculturation, ethnic identity, and dating violence among Latino ninth-grade students. *Preventive Medicine, 39*, 373-383. doi: 10.1016/j.ypmed.2004.01.034

Saul, L. J. (1971). *Emotional maturity: the development and dynamics of personality and its disorders*. Philadelphia, PA: J. B. Lippincott Company.

Schore, A. N. (2001). The effects of early relational trauma on right brain development, affect regulation, and infant mental health. *Infant Mental Health Journal, 22* (1-2), 201-269. doi: 10.1002/1097-0355(200101/04)

Schreiber, J. B., Nora, A., Stage, F. K., Barlow, E. A., & King, J. (2006). Reporting structural equation modeling and confirmatory factor analysis results: a review. *The Journal of Educational Research, 99*(6), 323-337. doi: 10.3200/JOER.99.6.323-338

Seinfeld, J. (1991). *The empty core: an object relations approach to psychotherapy of the schizoid personality*. Northvale, NJ: Jason Aronson.

Sharkey, J. D., Shekhtmeyster, Z., Chavez-Lopez, L., Norris, E., & Sass, L. (2011). The protective influence of gangs: Can schools compensate? *Aggression and Violent Behavior, 16*, 45-54. Retrieved from http://www.journals.elsevier.com/aggression-and-violent-behavior/

Shekhtmeyster, Z., Sharkey, J., & You, S. (2011). The influence of multiple ecological assets on substance use patterns of diverse adolescents. *School Psychology Review, 40*(3), 386-404. Retrieved from http://www.nasponline.org/publications/spr/index.aspx?vol=43&issue=1

Shoemaker, D. J. (2009). *Juvenile delinquency*. Lanham, MD: Rowman & Littlefield.

Siegel, L. J., & Welsh, B. C. (2012). *Juvenile delinquency: theory, practice, and law* (11th ed.). Belmont, CA: Cengage.

Silverstein, M. L. (2007). *Disorders of the self: a personality-guided approach.* Washington, DC: American Psychological Association.

Skeer, M., McCormick, M. C., Normand, S.-L. T., Buka, S. L., & Gilman, S. E. (2009). A prospective study of familial conflict, psychological stress, and the development of

substance use disorders in adolescence. *Drug and Alcohol Dependence, 104*(1-2), 65-72. doi:10.1016/j.drugalcdep.2009.03.017

Slavik, S., Sperry, L., & Carlson, J. (1992). The schizoid personality disorder: a review and an Adlerian view and treatment. *Individual Psychology, 48*(2), 137-154. Retrieved from https://utpress.utexas.edu/index.php/journals/journal-of-individual-psychology

Steiger, J. H., & Lind, A. (1980, June). *Statistically based tests for the number of common factors*. Paper presented at the annual meeting of the Psychometric Society, Iowa City, IA.

Stouthammer-Loeber, M., Loeber, R., Homish, D. L., & Wei, E. (2001). Maltreatment of boys and the development of disruptive and delinquent behavior. *Development and Psychopathology, 13*, 941-955. Retrieved from http://journals.cambridge.org/action/displayJournal?jid=DPP

Substance Abuse and Mental Health Services Administration. (2010). *Results from the 2009 National Survey on Drug Use and Health: Volume I. Summary of National Findings*. Rockville, MD: Substance Abuse and Mental Health Service Administration.

Teplin, L. A., Abram, K. M., McClelland, G. M., Dulcan, M. K., & Mericle, A. A. (2002). Psychiatric disorders in youth in juvenile detention. *Archives of General Psychiatry, 59*, 1133-1143. Retrieved from http://archpsyc.jamanetwork.com/journal.aspx

Titus, J. C., Dennis, M. L., White, W. L., Scott, C. K., & Funk, R. R. (2003). Gender differences in victimization severity and outcomes among adolescents treated for substance abuse. *Journal of Child Maltreatment, 8*(1), 19-35. Retrieved from http://www.sagepub.com/journals/Journal200758

Trentacosta, C. J., Hyde, L. W., Shaw, D. S., & Cheong, J. (2009). Adolescent dispositions for antisocial behavior in context: the roles of neighborhood dangerousness and parental knowledge. *Journal of Abnormal Psychology, 118*(3), 564–575. doi: 10.1037/a0016394

Tucker, L. R., & Lewis, C. (1973). A reliability coefficient for maximum likelihood factor analysis. *Psychometrika, 38,* 1-10. doi: 10.1007/BF02291170

Ulman, R. B., & Paul, H. (2006). *The self psychology of addiction and its treatment: Narcissus in wonderland.* New York, NY: Routledge.

U.S. Department of Health and Human Services. (2008). *What challenges are boys facing, and what opportunities exist to address those challenges?* Retrieved from http://aspe.hhs.gov/hsp/08/boys/factsheets/vm/report.pdf

U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration. (n.d.). *National Registry of Evidence-Based Programs and Practices*. Retrieved from http://nrepp.samhsa.gov/ViewAll.aspx

U.S. Department of Justice, Office of Juvenile justice and Delinquency Prevention. (2013). PTSD, trauma, and comorbid psychiatric disorders in detained youth. *Juvenile Justice Bulletin* (NCJ 239603). Retrieved from http://www.ojjdp.gov/pubs/239603.pdf

U.S. Department of Justice, Office of Justice Programs. (2014). Young offenders: what happens and what should happen? *Justice Research (*NCJ 242653). Retrieved from https://ncjrs.gov/pdffiles1/nij/242653.pdf

Van Dijke, A., Ford, J. D., van Son, M., Frank, L., & van der Hart, O. (2013). Association of childhood-trauma-by-primary caregiver and affect dysregulation with borderline

personality disorder symptoms in adulthood. *Psychological Trauma: Theory, Research, Practice, and Policy, 5*(3), 217-224. doi: 10.1037/a0027256

Welte, J. W., Barnes, G. M., Hoffman, J. H., Wieczorek, W. F., & Zhang, L. (2005). Substance involvement and the trajectory of criminal offending in young males. *The American Journal of Drug and Alcohol Abuse, 31*(2), 267–284. doi: 10.1081/ADA-200047934

Werner, E. E. (1996). Vulnerable but invincible: high risk children from birth to adulthood. *European Child & Adolescent Psychiatry, 5* (Suppl. 1), 47-51. Retrieved from http://link.springer.com/journal/787

White, M., & Weiner, M. B. (1986). *The theory and practice of self psychology*. Levittown, PA: Taylor & Francis Group.

Widom, C., Marmorstein, N., & White, H. (2006). Childhood victimization and illicit drug use in middle adulthood. *Psychology of Addictive Behaviors 20*(4), 394-403. doi: 10.1037/0893-16X.20.4.394

Wills, T. A., & Cleary, S. D. (1996). How are social support effects mediated? A test with parental support and adolescent substance use. *Journal of Personality and Social Psychology, 71*(5), 937-952. doi: 10.1037/0022-3514.71.5.937

Wills, T. A., Sandy, J. M., & Yaeger, A. M. (2002). Moderators of the relation between substance use level and problems: test of a self-regulation model in middle adolescence. *Journal of Abnormal Psychology, 111*(1), 3-21. doi: 10.1037//0021-843X.111.1.3

Winnicott, D. W. (1986). *Home is where we start from: essays by a psychoanalyst*. New York, NY: W. W. Norton & Company.

Wymbs, B. T., McCarty, C. A., King, K. M., McCauley, E., Vander Stoep, A., Baer, J. S., & Waschbusch, D. A. (2012). Callous-unemotional traits as unique prospective risk factors for substance use in early adolescent boys and girls. *Journal of Abnormal Child Psychology, 40*(7), 1099-1110. doi: 10.1007/s10802-012-9628-5

Zeman, J., Cassano, M., Perry-Parrish, C., & Stegall, S. (2006). Emotion regulation in children and adolescents. *Developmental and Behavioral Pediatrics, 27*(2), 155-168. Retrieved from http://journals.lww.com/jrnldbp/Pages/default.aspx

Appendix A

Table A

GAIN Intake Survey Questions

	Survey Items	Full Question
General Victimization Scale		
1	Trauma: attacked with weapon	Has anyone ever... attacked you with a gun, knife, stick, bottle or other weapon?
2	Trauma: was beaten	hurt you by striking or beating you to the point that you had bruises, cuts, or broken bones or otherwise physically abused you?
3	Trauma: forced into sex	pressured or forced you to participate in sexual acts against your will, including your regular sexual partner, a family member or friend?
4	Trauma: abused emotionally	abused you emotionally; that is, did or said things to make you feel very bad about yourself or your life?
5	Trauma: abused over long time	Did any of the previous things happen… several times or over a long period of time?
6	Trauma: more than one perpetrator	with more than one person involved in hurting you?
7	Trauma: perpetrator so. you trusted	where one or more of the people involved was a family member, close family friend, professional or someone else you had trusted?
8	Trauma: afraid for your life	where you were afraid for your life or that you might be seriously injured?
9	Trauma: resulted in vaginal/oral/anal sex	and result in oral, vaginal or anal sex?

10	Trauma: people told didn't believe you	people you told did not believe or help you?

Substance Problem Scale-Lifetime

1	Substance: tried to hide use	When was the last time that … you tried to hide that you were using alcohol or drugs?
2	Substance: others complained	your parents, family, partner, co-workers, classmates or friends complained about your alcohol or drug use?
3	Substance: used weekly	you used alcohol or drugs weekly?
4	Substance: caused psychological problems	your alcohol or drug use caused you to feel depressed, nervous, suspicious, uninterested in things, reduced your sexual desire or caused other psychological problems?
5	Substance: caused health problems	your alcohol or drug use caused you to have numbness, tingling, shakes, blackouts, hepatitis, TB, sexually transmitted disease or any other health problems?

Cautious Personality Index

1	Schizoid: could not trust people	Do each of the next statements describe you during the past 12 months: you could not really trust most people.
2	Schizoid: rather than mad, get even	rather than get mad, you wanted to get even.
3	Schizoid: tried to space out world	you daydreamed or tried to space out the world a lot.
4	Schizoid: didn't care to be around people	you did not care to be around other people much.
5	Schizoid: not emotional about people	you were not very emotional about other people or things.
6	Schizoid: afraid you were crazy	you were afraid that you were crazy.

General Social Support Scale		
1	Support: professional counselor	During the past 12 months, did you have the following kinds of social support: a professional counselor or other health provider to talk to?
2	Support: friends from other schools	friends or colleagues from other companies or schools you could talk to without worry about things getting back to others at work or school?
3	Support: people at school	people at work or school you could talk to about day-to-day things?
4	Support: help with getting things done	people at work or school who could help you get your assignments done?
5	Support: family members	family members or close partners you could talk to and rely on?
6	Support: friends to hang out with	friends you could just hang out with and not talk about work or family issues?
7	Support: legal hobby	a (legal) hobby or activity that you enjoyed and did for yourself?
8	Support: talk about your needs	someone you felt like you could talk to about needs and emotions?
9	Support: talk how to cope	someone you felt could help you figure out how to cope with any problems you were having or might have?

Note. Response options for all survey items were yes/no, with the exception of the five substance problems items that were rated 0 (*never*), 1 (*1+ year ago*), 2 (*2-12 months ago*), 3 (*past month*).