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INTERPERSONAL COMPETENCY CONFIGURATIONS AND THE SCHOOL ADJUSTMENT OF EARLY ADOLESCENTS WITH DISABILITIES: A PERSON-CENTERED APPROACH

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A dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy at Virginia Commonwealth University

by

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Dedication

To Scott, Charley, and Drew

I love you more than words can express. This is for us.

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Abstract

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The transition to middle school is a critical time in adolescence. The more complex school environment provides opportunities for growth and challenges for students with disabilities. Although special education strives to provide individualized supports to students with disabilities through data-based decision-making, the tools used to understand and meet the needs of these students are often unresponsive to the dynamic nature of development and student adjustment as they age. Grounded in developmental science, this study sought to create a data collection framework through a person-centered approach to inform the individualization process. Specifically, this study: 1) explored a decision process that allows interventionists to place students in well-established interpersonal competency configurations that can guide interventions; 2) understand how different academic, behavioral, and emotional outcomes are

related to SWD in specific configurations, and if these outcomes change from 6th to 7th grade, and 3) clarify potential process variables and their interactions with students within specific configurations to explore how these variables contribute to student functioning and potential adaptations. Results established a process practitioners can use to place SWD in configurations informed by interpersonal competencies and provided insight into differential patterns of adjustment and developmental mechanisms that are associated with different trajectories and outcomes for SWD in middle school.

Chapter 1

Introduction

Special education in the United States is based on the principle of individualization. Research shows students with disabilities (SWD) require individualized supports, and the Individuals with Disabilities Education Act (IDEA, 2004) emphasizes this point by requiring all SWD receive individualized services (Hussar et al., 2020; Ludlow, 2014). The focus on individualization acknowledges the heterogeneity of SWD. Although this group of students is often characterized by low academic achievement, increased disciplinary referrals, and increased risks for relationship problems (Blanchard et al., 2006; Farmer et al., 2016; Farmer et al., 2019; Fuchs et al., 2018; National Center for Education Statistics, 2015), not all SWD experience these challenges in the school environment (Farmer et al., 2016; Farmer et al., 2019). Therefore, interventions and services must be tailored to the diverse needs and varied levels of support SWD require. Generating a way for framing differential support needs that is driven by data on patterns of adjustment related to different subtypes of youth can provide a better understanding of the heterogeneity and development of SWD as they age. This information can be used to identify specific strengths and needs to inform more responsive interventions that will benefit the individualization process and ultimately outcomes for SWD (Farmer, 2020).

Statement of Problem

As students age, the school environment becomes more complex in terms of structure (i.e. schedule, transitions, extracurricular activities, etc.), academic content, and socially hierarchical relationships (Farmer et al., 2013). The transition to middle school is a critical period because adolescent students are expected to navigate through these increased school complexities while experiencing developmental changes, including a need for autonomy, developing a sense of self,

and an increased need for peer acceptance (Farmer et al., 2013). Although complex, this transition offers educators opportunities to change and improve student academic, behavioral, and social patterns and pathways (Carnegie Council on Adolescent Development, 1995; Roeser & Peck, 2003).

Unfortunately, many students with disabilities struggle to make this adjustment in middle school, which leads to poor outcomes as they continue into high school and beyond (Estell et al., 2003; Estell et al., 2009; Farmer et al., 2008; Farmer et al., 2011). Although special education strives to provide individualized supports to students with disabilities through data-based decision making, the tools used to understand and meet the needs of these students are often unresponsive to the dynamic nature of development and student adjustment as they age (Farmer, 2020). To enhance outcomes for SWD, there is a need to better identify risk and differential needs early in middle school to guide tailored interventions that are responsive to differential developmental needs to support more adaptive developmental patterns of SWD during early adolescence (Farmer, 2020).

Overview of Constructs

Adolescence is a critical developmental period characterized by vulnerability and change (Carnegie Council on Adolescent Development, 1995; Eccles & Roeser, 2011; Roeser & Peck, 2003). During this time, the transition to middle school becomes an important context for social, academic, and behavioral adjustment with opportunities for evolving patterns and pathways of educational engagement and achievement (Carnegie Council on Adolescent Development, 1995; Eccles & Roeser, 2011; Roeser & Peck, 2003). While many students transition through middle school without issue, a significant number of adolescents, including SWD, experience adjustment difficulties during this time (Carnegie Council of Adolescent Development, 1995;

Collier, 2015; Roeser et al., 2000; Ryan et al., 2013). To help us understand individual student development and their adjustment patterns during adolescence that can inform and enhance interventions, the following sections discuss key concepts related to the Ecological and Developmental Systems Theory (DST).

Ecological and Developmental Systems Theory

The complexities inherent in adolescent development and the contexts in which they learn can be elucidated through the lens of the Ecological Systems and Dynamic Systems Theories (DST). Examining the adaptation of individuals in context is central to developmental systems research (Darling-Hammond et al., 2020; Farmer, 2020). Developmental contexts are comprised of layered systems that influence one another and the functioning of individuals and entities in each system (Bronfenbrenner, 1979). Surrounding the individual at the core of the model is the microsystem, which consists of the immediate context. For adolescents, these contexts can include the classroom and teacher, other students, parents of the students, and other educational professionals (Motoca et al., 2014). Extending to the next level, the mesosystem contains the interactions of the contexts in the microsystem. The exosystem surrounds the micro and mesosystems and affects the interactions between the two systems (Bronfenbrenner, 1979). In education, the exosystem consists of policies, guidelines, and the use of resources that influence the classroom (Motoca et al, 2014). The culture, values, and laws surrounding and affecting the interactions in these layers comprise the outer-ring of the model, the macrosystem.

Within this framework is DST, which highlights the interconnected nature of the various ecological systems and domains of functioning within them. The DST perspective operates under five main assumptions: (1) there is an interconnected system consisting of numerous variables that are able to effect one another and the development of individuals; (2) although there are

general patterns and linear paths of development, individuals may diverge from these norms; (3) similar outcomes may be the result of different variables, causes, and routes of development; (4) conversely, similar variables, causes, and pathways may produce differing developmental outcomes in individuals; and (5) development consists of continual adaptations to the individuals and their ecology (Cairns & Cairns, 1994; Farmer, 2013; Farmer, Sutherland et al., 2016; Sameroff, 2000; Smith & Thelen, 2003). The Ecological Systems Theory with DST, when applied to education and adolescent development, takes on a whole child approach, which focuses on the student's academic, behavioral, social, and emotional domains, and how these domains interact and affect one-another. Further, this perspective provides insight into how schools and interventions can be structured to promote student adaptation by focusing on how the context of students' environments reinforces and supports their behavior and learning (Farmer, 2020). Specifically, the concepts of correlated constraints, equifinality, and multifinality are paramount to understanding individual developmental pathways and adjustment.

Correlated Constraints

Correlated constraints is a critical component for understanding the adaptation in trajectories of individual students. This concept posits various domains or ecologies work as an integrated system with functioning in one domain affecting functioning in others, and therefore promoting, changing, and sustaining behavior development (Magnusson & Cairns, 1996). Thus, promoting developmental reorganization and the realignment of individual student trajectories. Particularly in the school environment, these domains typically include academic, behavioral, social, and emotional (Cairns & Cairns, 1994; Farmer & Farmer, 2001; Farmer et al., 2013).

Equifinality and Multifinality

DST stresses the problematic nature of general patterns and linear paths of development, because individuals can diverge from these norms. Two key concepts explain individual divergence: equifinality and multifinality. Equifinality posits similar outcomes may be the result of different causes and routes of development; or conversely, multifinality suggests similar variables, causes, and pathways may produce differing developmental outcomes in individuals (Bertallanfy, 1968; Causadias & Cicchetti, 2018; Cicchetti & Rogosch, 1996). Equifinality and multifinality in the school environment can help explain why some SWD experience positive developmental trajectories as they transition through middle school while others' development is reorganized into negative developmental trajectories (Farmer, 2020). By understanding the factors related to this phenomenon, educational researchers and practitioners could better individualize interventions.

Developmental Process Factors

Developmental process factors play a vital role within correlated constraints, equifinality, and multifinality. Defined as developmental factors and experiences within everyday activities, process variables influence student changes and adaptation in the school setting (Farmer, Sutherland, et al., 2016; Farmer et al., 2019; Smith & Thelen, 2003). These types of variables can mediate or moderate outcomes in all domains of school functioning including academic achievement, discipline problems, social status, and emotional well-being (Farmer, Sutherland, et al., 2016; Farmer et al., 2019; Goodenow, 1993). The present study examines school belonging and involvement, emotional support and risk for classroom participation, peer protection and peer encouragement from bullying, student sociometric status, and the student's placement in the social network.

Together, these constructs are intended to explain a framework of adolescent development that can clarify different patterns of adjustment and possible developmental mechanisms that are associated with various trajectories of student adjustment in middle school. Research examining the interplay of these mechanisms in relationship to school functioning is imperative for intervention creation, adaption, and individualization for SWD.

Rationale for Study of Problem

Currently, educational research largely focuses on finding what works for whom primarily through variable centered approaches in cluster-randomized trials (Farmer, 2020; Slavin, 2019, Cook et al., 2013). These studies group students using random assignment for experimental and control conditions. This design is used to ensure the independent variable (i.e.. intervention or instructional practice) causes change in the dependent variable (i.e. student outcomes) and eliminates the possibility of alternative explanations for the change in the dependent variable (Cook et al., 2013; Gersten et al., 2005; Slavin, 2019). Further, studies must demonstrate quality intervention implementation that focuses on fidelity. To achieve fidelity, many studies and the evidence-based practices (EBPs) established in them, use scripts to ensure that the interventionists follow proper protocols and every student receives the same quality of implementation (Mayer, 2004). While analyzing these practices' effects on a large scale and establishing EBPs through rigorous research methods are important, variable centered analysis ignores students' unique developmental patterns and their effects on the EBP or intervention (Farmer, 2020).

Special education is based on the concepts of individualization and responsiveness; therefore the research in this field needs to reflect that by moving beyond large-scale variable centered approaches to understand natural developmental processes, risks, and identify possible

ways to integrate a developmental focus into the intervention process by leveraging natural developmental processes as an intervention ally. Person-centered approaches (PCAs; e.g. cluster analysis, Latent Class Analysis; LCA, and Latent Transition Analysis; LTA; Farmer, 2019; Farmer, 2020; Farmer et al., 2020; Masten, 2001; Lanza & Collins, 2010) can play a role in shifting this focus by holistically accounting for individual developmental pathways and the specific processes that impact student trajectories and ultimately their academic, behavioral, social, and emotional outcomes.

Statement of Purpose

In an effort to enhance the individualized support and adaptation of SWD, the purpose of this study was to use PCAs to explore a decision process that allows interventionists to place students in well-established interpersonal competency configurations that can guide interventions. By examining groupings based on student social acceptance, antisocial behavior, academic performance, and internalizing problems along with affiliative, physical (Olympian), and internalizing characteristics, researchers can gain insight into subtypes of youth and related differences in their developmental patterns and adaptation that can be used to individualize interventions for students with disabilities (Chen et al., 2019; Bergman et al., 2003; Cairns & Cairns, 1994). Next, this study sought to investigate the concept of correlated constraints by better understanding how different academic, behavioral, and emotional outcomes are related to SWD in specific profiles, and if these outcomes change through middle school. Finally, to clarify processes related to equifinality and multifinality, this study sought to explain potential process variables and their interactions with students within specific configurations to explore differential patterns over time to see how these variables contribute to student functioning and developmental pathways. From this research, practitioners can use decision rules to place

students in configurations, understand the configurations' relationships to various social process variables and overall student functioning, and then use this information to individualize the intervention process to make it more responsive to student needs and their interactions in the school environment based on developmental science.

Research Aims

Research Aim 1

This study is guided by three research aims. In the first research aim, I sought to create a set of decision rules that practitioners can use to place students with disabilities in distinct configurations based on the teacher completed Interpersonal Competency Scale (ICS-T). I created these rules, then used them to re-classify students from a subsample of a previous LPA configuration study (Chen et al., 2019). Although this aim was exploratory in nature, I compared the groups classified by the decision rules and LPA to investigate the variability across methods and begin to validate the decision rule process. The specific research question for this aim included: Is there large variability between the LPA model and decision rules configurations?

The decision rule process was created using configuration descriptions from the extensive Interpersonal Competency Patterns (ICP) literature (Chen et al., 2019; Estell et al., 2003; Estell et al., 2007; Farmer et al., 1999; Farmer et al., 2008; Farmer et al., 2011) as well as data related to students' with disabilities characteristics and placement within the configurations (Chen et al., 2019; Farmer et al., 1999; Farmer et al., 2011). Therefore, I hypothesized there would be little variability between the configurations created from the LPA process and those created using the decision rule process.

Research Aim 2

Next, using the configurations established by the decision rules, I sought to extend from the literature base and measure the predictive relationship of SWDs' ICP configurations in the fall of 6th grade and various longitudinal academic (i.e., school reported end of year grades), behavioral (i.e., school reported attendance and suspension referrals), and emotional outcomes (i.e., student reported anxiety and emotional struggles) in the spring of 6th grade then again in the spring of 7th grade. The specific research questions for this aim included:

1. Do students with disabilities' academic, behavioral, and emotional outcomes vary based on their placement within a specific ICP configuration?
2. Do these outcomes vary overtime?

Research Aim 3

The third research aim was exploratory in nature. In this aim, I sought to investigate SWD in teacher placed at-risk configurations' adjustment from the fall of the 6th grade to the spring of the 7th grade measured by peer nominated behavior indicators. Next, I analyzed student reported school climate and social process variables in relationship to the change or stability of student adjustment over time to establish potential patterns that can inform the individualized data-based decision making process. Specific research questions for this aim included:

1. How do students with disabilities in ICP configurations' adjust through middle school compared to their same age and gender peers on Peer Behavioral Assessments?
2. Are there specific process variables related to SWD adjustment?
3. Can clear patterns of development be identified using ICP configurations, Peer Behavioral Assessments, and school climate and social process variables?

Chapter 2

Literature Review

Given the critical nature of adolescent development coupled with the transition to middle school, their impact on overall student outcomes, and implications for academic and behavior interventions, it is necessary to examine these concepts in the literature. This chapter begins with a discussion on adolescent development in relation to DST, and then moves to a conceptual review explaining specific process variables, their role in understanding how students develop, and their impact on various outcomes. Next, the value of person-centered approaches to better understand adolescent development is discussed. Finally, a literature review of prior research using these methods and their implications for future study is presented.

Adolescent Development and Developmental Systems Theory

Early adolescence is a critical yet vulnerable time in development. It is characterized by significant biological, psychological, social, environmental, and educational changes (Eccles & Roeser, 2011; Vollet et al., 2017). Biologically, adolescents go through puberty and change physically. Psychologically, adolescents mature while their social networks and school environment increasingly becomes more complex. Further, as adolescents transition from elementary to middle school, the school environment serves as an important context for social, academic, and behavioral adjustment with opportunities for evolving patterns and pathways of educational engagement and achievement (Carnegie Council on Adolescent Development, 1995; Eccles & Roeser, 2011; Roeser & Peck, 2002).

Fortunately, most adolescents transition to middle school without issue. These students find the transition to middle school to be an opportunity to mature physically and emotionally, and expand and deepen their social connections while engaging in academic coursework (Carnegie

Council of Adolescent Development, 1995; Roeser, Eccles, & Sameroff, 2000). However, the transition to middle school is not successful for every student (Ryan et al., 2013). Wang and Dishion (2012) found student perceptions in academic support, school behavior management, teacher social support, and peer social support decreases while student deviant behavior increases during the middle school years. Additionally, students' academic engagement, motivation, self-perception, and grades decline during this time (Eccles & Midgely, 1989). Developmental science theories suggest that as students transition to middle school, the shifting nature of the social–affective context of middle schools makes students susceptible to adjustment difficulties (Hamm et al., 2011).

Instructional changes in middle school, including behavior management techniques, instructional practices, and teacher-student relationships, could also contribute to potential student difficulties. Research shows secondary teachers provide less student autonomy and rely heavily on discipline and control for behavior management (Midgley & Feldlaugher, 1987; Midgley et al., 1988). For instruction, secondary teachers commonly use whole group instruction (Feldlaugher et al., 1988), have higher grading standards (Eccles & Midgley, 1989), and less self-efficacy with struggling students (Midgley et al., 1989). The instructional focus shifts from general development and abilities goals to achievement and specific demonstrations of academic abilities (Urdan & Midgley, 2003; Farmer et al., 2013) Further, teachers at the secondary level make more social comparisons among students and have less close and positive relationships with the students (Eccles & Midgely, 1989). Farmer and colleagues (2013) suggest these factors could help explain why students increasingly believe school is an antagonistic and competitive environment that encourages negative self-evaluations and social comparisons. These influences on student academic, behavioral, social, and emotional adjustment are critical because student

adaptation through middle school can constrain future educational goals and outcomes including substance abuse, academic grades, school completion, and career attainment (Estell et al., 2007; Farmer et al., 2013; Roeser, Eccles, & Sameroff, 2000).

Developmental Science and the Dynamic Systems Theory

To address the issues described above, meet the needs of adolescents, and improve their longitudinal outcomes, it is necessary to take into account the dynamic nature of development (Farmer & Farmer, 2001; Wang & Dishion, 2012). The developmental science perspective views the individual as an integrated entity affected by the dynamic interaction among their internal (i.e. biological, cognitive, and physiological) and external (peer group, family, community, and culture) systems (Cairns & Cairns, 1994; Farmer & Farmer, 2001).

DST, a theory within developmental science and the Ecological Systems Theory, provides insight into how students develop as an integrated whole by clarifying processes of development across the life span that can inform school interventions (Cairns et al., 1996; Farmer et al., 2013). This perspective conceives development as a process of continual adaptations to the individuals and their environment (Cairns & Cairns, 1994; Farmer, 2013; Farmer, Sutherland et al., 2016; Sameroff, 2000; Smith & Thelen, 2003). The concepts of correlated constraints, variable effects on pathways and outcomes, and how this information can be used to inform necessary adaptations to individual students and their ecology provide the foundation for this study.

Correlated Constraints

Correlated constraints describe how various domains or ecologies work as an integrated system with functioning in one domain affecting functioning in others, and therefore promoting and sustaining behavior development (Magnusson & Cairns, 1996). In the school environment, these domains typically include social, behavioral, and academic (Cairns & Cairns, 1994; Farmer

& Farmer, 2001; Farmer et al., 2013). Students with adjustment difficulties usually do not have problems in only one domain. Instead they have issues in multiple domains that interact and affect one another (Cairns & Cairns, 1994; Farmer & Farmer, 2001).

To better understand the concept of correlated constraints it is important to consider the nature and interplay of the three main school domains. For example, in the social domain, adolescent students increasingly seek approval from their peers instead of adults (Eccles & Roeser, 2011). To this end, the role of the peer becomes increasingly important in the development of the values, goals, and behaviors of adolescents (Chen et al., 2015). Specifically, adolescent students, through their interactions and social synchronizations with similar or complementary peers, form distinct peer groups, social networks, and social roles that may support and sustain their patterns of behavior and adjustment in the classroom (Chen et al., 2015). Studies demonstrate these social network structures are created around key variables including social dominance, perceived popularity, and academic achievement (Farmer, 2000; Norwalk et al., 2015). Therefore a student's social domain is influenced, and maintained by variables in the behavior and academic domains. Additionally, the social domain affects student outcomes in the behavioral and academic domains. Students with adjustment difficulties in various school domains tend to experience school failure, school dropout, and reduced educational attainment (Cairns & Cairns, 1994; Estell et al., 2007; Walker & Sprague, 1999).

In accordance with developmental science and expanding from the three main domains of school functioning, research has shown it is important to also consider a student's emotional well- being and its role in school and adolescent adjustment (Aviles et al., 2006). For the present study, the term emotional functioning encompasses the internal and external effects of anxiety and depression in adolescents (Birmaher, et al., 1999; Dirks et al., 2014; Goodman 1997;

Goodman 2001). Emotional well-being plays a major role in an adolescents' ability to function in their student role as well as negotiate the school environment (Aviles et al., 2006). Approximately 18 million children and adolescents in the United States experience emotional health problems (Costello et al., 2003). Adolescents that experience difficulties in this domain with anxiety and depression are at risk for suboptimal functioning and poor social, emotional, and academic success (Aviles et al., 2006; National Research Council, 2009). Not only can emotional well-being affect school functioning, but schools are also in a unique position to provide mental health services (Fazel et al., 2014; Lyon et al., 2016). Therefore, understanding the connection emotional well-being has with the three domains of school functioning and potential interventions in the school setting are imperative to explore.

Equifinality and Multifinality

Causadias and Cicchetti (2018) state, "Individuals develop adaptation and maladaptation over time is in response to previous experiences, current circumstances, and social and personal resources" (p. 1549). The interplay and impact of these factors on developmental trajectories sets up the foundation for the phenomenon of equifinality and multifinality. Equifinality refers to the DST principle that similar outcomes may be the result of different variables, causes, and routes of development. Contrariwise, multifinality refers to the DST principle similar variables, causes, and pathways may produce differing developmental outcomes in individuals (Cairns & Cairns, 1994; Farmer, 2013; Farmer, Sutherland et al., 2016; Sameroff, 2000; Smith & Thelen, 2003).

Research related to these concepts highlights the multiplicity of contributors to student outcomes. While some contributors are consistent across individuals and pathways, often they vary, thus creating many different pathways (Cairns & Cairns, 1994; Cicchetti & Rogosch, 1996; Ettekal et al., 2020; Farmer, GatzkeKopp et al., 2016; Weeks et al., 2016; Yoon et al., 2019).

Specifically, Ettekal and colleagues (2020) found heterogeneity in development patterns related to internalizing and externalizing problems in adolescents. Three high-risk profiles (i.e. chronic co-occurring externalizing and internalizing problems, moderate co-occurring externalizing and internalizing problems, and purely externalizing problems) emerged consisting of students with more individual and contextual adverse childhood events compared to the low-risk group. While the at-risk trajectories shared many similarities including lower ego-resilient personalities, higher levels of teacher-student conflict, being African American, and male, one high-risk profile, the chronic co-occurring trajectory, was connected to unique contributors: low language ability and peer rejection.

Further, Yoon et al. (2019) found connections to childhood abuse and varied trajectories of deviant peer affiliations (i.e. steep ascending, slightly ascending, and declining), with placement in these trajectories being associated with future drug use. Interestingly, students who experienced increased physical abuse were more likely to be in the steep ascending trajectory while students who experienced increased sexual abuse were more likely to be in the declining association with deviant peers group. Membership in the steep ascending trajectory predicted higher use of alcohol, marijuana, and tobacco. The declining group also had increased use of tobacco use compared to the slightly ascending trajectory. The studies above highlight the concepts related to and the complexities of the phenomena of equifinality and multifinality with adolescent youth and their potential outcomes. The complexities inherent in development should be further studied and considered an ally to individualizing interventions in special education (Farmer, 2020; Farmer et al., 2016).

Process Variables

To truly understand correlated constraints and the concepts of equifinality and multifinality, it is important to cognize certain variables' contribution to adolescent student pathways and outcomes. Students adapt their behaviors, beliefs, and values to their experiences and opportunities in the classroom ecology. Known as process variables, these developmental factors and experiences within everyday activities influence student interactions, trajectories, and adaptation in the school setting (Farmer, Sutherland, et al., 2016; Farmer et al., 2019; Smith & Thelen, 2003). Thus they serve as indicators of a continual process of alignment of student characteristics with the affordances and demands of the classroom environment. Examples of these variables include school belonging, school involvement, bullying experiences, peer group affiliations, and parental support. Process variables can mediate or moderate outcomes in all domains of school functioning including academic achievement, discipline problems, social status, and emotional well-being (Farmer, Sutherland, et al., 2016; Farmer et al., 2019; Goodenow, 1993). The present study examines the contribution of school climate process variables: *school belonging* and *involvement*, *emotional support and risk for classroom participation*, *peer protection from and peer encouragement for bullying*, *placement in social network, and sociometric status*. The following sections describe the impact of these process variables on student adjustment.

School Belonging and School Involvement

School belonging and *school involvement* are imperative to positive school adjustment (Osterman, 2000). *School belonging* includes students' feelings of connectedness to their classrooms and schools through support from others in a safe environment (Furrer & Skinner, 2003; Goodenow, 1993; McMillan & Chavis, 1986). This variable illustrates the interconnected

nature of school functioning by connecting adolescents' motivation to their achievement through their social perceptions of being liked and valued by peers (Hamm & Faircloth, 2005; Roeser et al., 1996). Meaning, to the extent students perceive a school and classroom environment as supportive with peers and teachers that value effort and treat mistakes as new learning opportunities, they will develop a stronger sense of belonging to these environments (Hamm & Faircloth, 2005). A positive sense of *school belonging* is associated with decreased nonacademic risk behaviors including violence, pregnancy, and suicide (Resnick et al., 1997). Students' *school involvement*, or a student's participation in school activities, is another key component of the school climate. *School belonging* and *involvement* collectively express that the student is an important part of the school environment and the school environment is an important part of that student's personal experiences. These feelings affect student development and adjustment (Finn, 1989, Voelkl, 1997).

However, as adolescents navigate the middle school environment, developing a sense of belonging and encouraging involvement can be a challenge for educators. Middle school students often perceive their classroom as unsupportive and worry their participation in the classroom will elicit negative peer perceptions; these fears may cause students to disengage from the class and school (Brown, 1993; Farmer et al., 2013; Fordham & Ogbu, 1986; Juvonen & Murdock, 1995). Disengagement from school can then lead to a pattern of negative school behaviors and withdrawal (Voelkl, 1996). Conversely, students in classrooms where the teacher promoted respect and discouraged peer ridicule perceived less emotional risk for participation, enhanced engagement, and decreases in disruptive behaviors (Farmer et al., 2013; Finn, 1989; Hamm & Faircloth, 2005; Hamre & Pianta, 2010; Ryan & Patrick, 2001; Wentzel, 1999).

Emotional Support and Emotional Risk for Participation

As students transition into adolescence, their social image becomes very important, and the act of participating in school or the classroom can affect that image (Hamm et al., 2013). This is especially true for students that appear to struggle academically and ask for teacher assistance (Juvonen & Murdock, 1995; Ryan & Pintrich, 1997). These attributes and actions tend to have a negative impact on the student's image. However, there are strong relationships between teacher empathy and student perceptions of academic motivation (Danielson et al., 2010; Stornes et al., 2008). Therefore, student perceptions of the emotional support provided by teachers and the risk involved with participation become an important influencer in their willingness to engage in instruction and overall sense of *school belonging* (Hamm & Faircloth, 2005). Specifically, studies show students with positive perceptions of support for participation experience greater interest in school, academic initiative, and academic achievement (Danielsen et al., 2010; Wentzel et al., 2010).

Peer Protection from Bullying and Peer Encouragement for Bullying

Bullying is defined as a group of aggressive behaviors, including social isolation, threats or acts of violence, and taunting, directed toward a person or group. Key to the concept of bullying is the power dynamic; meaning, the aggressor must be in a more powerful social position compared to the victim. Additionally, the aggressive behaviors must occur repeatedly and over time (Olweus, 1994). Unfortunately, bullying, either as an aggressor, victim, or aggressor-victim, is a part of the school ecology for adolescents (Song, 2006). At least 25% of adolescent students report either witnessing or being a part of a bullying experience (Cowie, 2000; Twemlow et al., 2004). Research shows that student perceptions of bullying, either against or encouraging it, plays an important role in the school environment and student experience (Chen et al., 2015;

Farmer et al, 2014; Hamm et al., 2010). Peer protection from bullying is defined as student interactions with each other that provide a shield from internal and external stressors related to bullying (Song, 2006). Peer protection from bullying is supported by positive and mutual friendships, and is associated with moderating bullying (Sutton & Smith, 1999; Song, 2006).

Peer Affiliation, Social Hierarchy, and Sociometric Status

In addition to school climate elements, the role of the peer group becomes an increasingly important variable affecting adolescent development, academic growth, and overall adjustment in middle school (Chen et al., 2015; Estell et al., 2003; Farmer, Chen et al., 2016; Farmer et al., 2013; Farmer et al., 2014). Through peer affiliations, or who peers associate with, middle school students begin to form distinct peer groups, social networks, and social roles that create and maintain behavior patterns and overall adjustment (Chen et al., 2015; Estell et al., 2003, Farmer et al., 2014). Peer affiliations are typically created around similar and complimentary student characteristics (Cairns et al., 1997; Farmer et al., 2014). The characteristics include motivational orientation and behavioral engagement (Kindermann, 1993). Once groups are formed, the behaviors of its members synchronize and become more homogenous while the groups become more heterogeneous from one another based on the characteristics above (Estell et al., 2003; Farmer et al., 2014; Kindermann, 1993).

In hierarchically organized social networks, not only do groups have their own identity and standing, but also members in these groups take on various roles that affect their social standing in the group. Some students play a nuclear, or central role, in the peer group. As such, they are seen as popular and highly influential in the peer network. Other less central members of the group have secondary roles that complement the leaders' behaviors. Peripheral members of the group are seen as outsiders, and their role in the group is less clear. Students without any

connections to a peer group are seen as isolated from the social network (Farmer, et al., 1999; Farmer & Rodkin, 1996). These distinct groups coupled with the centrality of the students' membership in that group may encourage and sustain specific behavior patterns (Chen et al., 2015; Farmer et al., 2014). Research shows peer affiliation and the dynamics within that affiliation is connected to motivation, school engagement, deviant behavior, and academic achievement outcomes (Chen et al., 2015; Estell et al., 2003; Farmer et al., 2014; Hamm & Faircloth, 2005; Kindermann, 1993).

Person-Centered Analysis Approaches

With the complexities inherent in adolescent adjustment and the school contexts in which adolescents develop, it is important to take a nuanced analytical approach that allows for understanding of the whole child, their distinct characteristics, and processes that affect their adjustment through person-centered approaches (Lanza et al., 2010). As described by Bergman and Trost (2006), "the focus [of PCA] is to understand development at the individual level by regarding the individual as a functioning whole with processes operating at a system level and its components jointly contributing to what happens in development" (p. 604). In relation to studying student functioning through a DST lens, PCAs allow for a comprehensive and nuanced model of adaptation by identifying students who demonstrate synchronized academic, behavioral, and social patterns (Farmer, Gatze-Kopp et al., 2016; Farmer et al., 2011; Roeser & Galloway, 2002). Coupling developmental science with PCA provides a powerful foundation for demonstrating the multiple interactive processes within adolescents, and their ecological contexts that influence the formation of educational pathways from early childhood through adolescence (Peck et al., 2008; Roeser & Peck, 2003).

PCA differs from variable centered approaches by identifying groups of individuals who share unique patterns of developmental attributes as opposed to examining the relative contributions of a predictor variable on an outcome of interest (Farmer et al., 2011; Laursen & Hoff, 2006). Such methods assume that development is universal and static (Farmer, 2020). With PCA, various analytic approaches, including cluster analysis, latent profile analysis, and latent transition analysis, allow researchers to describe variations in a population based on differences across individuals on a set of behaviors or characteristics, instead of looking at the variance with one variable. Although the majority of studies looking at student adaptation use variable centered approaches, it can be augured that PCAs offer a better pathway to understanding the complicated and coordinated nature of student development and potential maladjustment within complex school environments (Chen et al., 2019; Farmer, 2020; Farmer et al., 2011; Olivier et al., 2018; Peck et al., 2008; Roeser & Peck, 2003;). This is because no single variable can universally explain student adjustment. Instead, each student characteristic is affected by its relationships with others, and these relationships must be accounted for in educational research (Roeser & Peck, 2003). However, PCA and variable centered approaches do not have to be mutually exclusive. They can work in tangent to help understand how individual characteristics and configuration membership are related to specific predictor variables and outcomes (Bergman & Trost, 2006; Farmer et al., 2011). The following literature review includes studies that exclusively use PCAs or PCAs with the addition of variable-centered approaches.

The majority of studies using PCAs create configurations based on a combination of academic, behavior, and social-emotional factors to measure their relationships to academic outcomes from early childhood through post-secondary education. Beginning in preschool, Bulostky-Shearer, Bell, and Dominguez (2012) found students in academically and socially

disengaged profiles maintained the lowest academic skills throughout the school year compared to other profiles. Recently, King, Gonzalez, and Reinke (2019) found similar outcomes in elementary schools. Using a sample of behaviorally at-risk students, these researchers used academic and behavioral indicators to create distinct configurations and measure their performance on standardized state tests. Configurations predicted success on state assessments with behaviorally at-risk students with academic deficits being the most likely to fail. Although the behaviorally at-risk configuration without academic deficits was less likely to fail the tests, these students were still at a significant risk for failing, indicating that both behavior and academic competency effect student academic outcomes.

At the secondary level, academic outcomes primarily focus on school completion and college enrollment. Roeser & Peck (2003) clustered seventh grade students into groups based on academic motivation and mental health, compared them on other measures of academic and social-emotional functioning (i.e. verbal and mathematical ability, parent-reported rates of poor performance or failure in school, standardized test scores, teacher-rated grades, self-reported future educational plans, and self-reported self-esteem), and linked these group memberships in middle school to future college enrollment. The groups mainly differed on motivation, mental health, and school achievement factors. Students in risk configurations (i.e. multiple risks in academics and mental health) experienced difficulties in the school environment including negative peer affiliations, adjustment issues, and lower rates of high school graduation and college participations compared to those adolescents in positive configurations. Other person-centered studies supported these results by finding certain types of configurations or typologies predict high school completion (Cairns & Cairns, 1989; Fortin et al., 2000; Janosz et al., 2000; Peck et al., 2008). Again, in these studies, youth within at-risk configurations in adolescence

characterized by aggressive behavior, low academics, and poor social affiliations were less likely to graduate from high school and pursue a college degree.

Moving beyond academic outcomes, research demonstrates PCAs can be used to assess the relationship between different levels and types of indicators as well as behavioral and academic outcomes. Olivier et al. (2018) identified profiles from behavior and social adjustment data then looked at these profiles' relationship to behavioral engagement and academic achievement outcomes. Although results were not conclusive for boys, girls in the sample exhibiting behavior and social difficulties had negative engagement and achievement outcomes during the school year. Further, using an ecological perspective to establish at-risk profiles, Lanza and colleagues (2010) also found students in certain profiles were at higher risk for negative academic and behavioral outcomes. To create the risk profiles, these researchers used child (i.e., cognitive, social, and behavior characteristics), family (i.e., single or two parent homes), and community (i.e. poverty rates, location) indicators from 13 domains in kindergarten to predict externalizing problem behaviors and low academic achievement in fifth grade. Each student exposed to an additional risk factor (e.g. living in single parent home or high poverty area) had a 20 to 40% increase of odds for poor outcomes in fifth grade.

Person Centered Approaches and Interpersonal Competency Patterns

With guidance from developmental science, researchers have used ICPs, or the ability to interact with others, to create profiles of students and identify potential risks in academic, behavioral, and social domains (Cairns & Cairns, 1989; Chen et al., 2019; Estelle, 2007; Estell et al., 2003; Farmer et al., 2004; Farmer et al., 2009 Farmer et al., 2008, Farmer et al., 2011). Of particular interest to the current study, numerous investigations used the ICS-T with PCAs to establish distinct interpersonal competency configurations. The ICS-T is a teacher reported scale

measuring student social acceptance, antisocial behavior, academic performance, and internalizing problems along with subsidiary factors including affiliative, physical (Olympian), and internalizing characteristics (For complete measure description, see Chapter 3). Over 20 years of research has demonstrated that students generally fit into five general interpersonal competency configurations: *Model, Passive, Tough, Troubled, and Neutral* (Chen et al., 2019; Estell et al., 2007; Farmer et al., 1999; Farmer et al., 2008; Farmer et al., 2009). The *Model* and *Neutral* configurations contain students that have overall positive ICPs in the school environment, and the students in the *Passive*, *Tough*, and *Troubled* configurations are considered at-risk in areas such as aggression, internalizing behaviors, social behaviors, popularity, and academics.

In 1999, Famer and colleagues found the majority of students identified with disabilities were placed in various risk configurations marked by low levels social acceptance and academic performance as well as high levels of antisocial behavior and internalizing problems. This was especially true for students with emotional and behavioral disorders (EBD) and learning disabilities (LD) once they reached high school. These students demonstrated higher levels of academic, behavioral, and social risks as compared to students without or with other disabilities. However, the distinct configurations from the ICS-T showed risks varied significantly across the different educational statuses. For example students with EBD were rated higher for behavior problems and lower in all educational classifications for social competence than all other students. Although, students with high incidence disabilities are at high risk for school adjustment problems in high school, the authors noted that 14% of nondisabled rural high school students were in the least adaptive configurations (struggled in all areas assessed) and about 18% were in configurations characterized by low levels of academic and social competence and

moderately high levels of internalizing behavior. These results demonstrate that both students with and without disabilities have distinct needs that interventions need to address. Farmer et al. (2008) also supported the idea that these subtypes of youth have different patterns of behavior and social risks that may necessitate customized types of intervention supports when they analyzed risk-configurations of preadolescent students. Their study found distinct subtypes of youth who exhibit behavior problems in late elementary school could be at risk for adjustment difficulties as they transition into and through adolescence.

Estell and colleagues (2007) used the ICS-T to create configurations at the beginning and end of middle school and analyze their relationship with distal academic and behavior outcomes in high school. Results showed trajectories of academic and social adaptation during middle school are related to 9th grade academic outcomes and self-reported substance use in rural African American youth. Supporting the idea that adolescence is a time of developmental change and opportunity, the authors found the percentage of rural African American youth in high-risk configurations in 6th grade dropped by 7% in the 8th grade. Therefore, it is important to recognize and analyze social process variables' potential effects on this adaptive change.

Recently, Chen and colleagues (2019) sought to determine if person-oriented approaches with the use of teacher reports of student ICPs could be used to support interventions by providing insights into adolescents with disabilities' transition into middle school and their perceptions of this transition. The authors found five distinct configurations: *Model, Tough, Average, Passive, and Troubled*. Results indicated that both students with and without disabilities were placed in at-risk configurations (i.e. *Tough, Passive,* and *Troubled*) and those placed in these configurations held negative perceptions of the middle school transition. Findings supported the DST framework, specifically the concept of correlated constraints, by confirming

students with the most severe difficulties experienced problems across multiple domains (i.e. academic, behavioral, and social). However, due to the nature of development and school transitioning, the authors suggested a need for more longitudinal studies that measure the predictive power of ICPs and process variables over time.

Taken collectively, the studies above demonstrate the utility of person-centered approaches in conjunction with DST to better understand student development, adjustment, and overall achievement in various domains. Further, many of the authors in these studies highlight the potential of this approach to better inform interventions. However, there are various methodological and theoretical concepts missing from the literature. Methodologically, there is a need to translate these findings to practitioners in a way that these professionals can apply these types of analysis in the school environment without the large participant numbers needed to establish statistically significant groups. Additionally, there is a need to better understand various process variables' connection with adolescent adjustment (Estelle, et al., 2007; Farmer, 2008). These variables can better inform interventions by giving insights into how to change the EBPs within them to improve adjustment trajectories and promote better outcomes in adolescence. For example, if a student is displaying aggressive behaviors, social processes could show they may be acting out in an effort to maintain their social status. Therefore, the behavior intervention needs to address this factor.

Conclusion

Theoretically, the literature well establishes the importance of adolescent development and the transition to middle school with long-term school outcomes. Yet, studies measuring distal outcomes related to PCAs in adolescence fail to look at these outcomes while students are still in middle school and there is still time to change their trajectory before moving to high

school. Additionally, many of the studies described above strictly look at academic or behavioral outcomes. To better understand and support components of DST, it is necessary to analyze outcomes related to the student as a whole. Meaning, researchers need to create profiles based on multiple domains of functioning and then see how these profiles are connected to various outcomes of development and school functioning (i.e. looking at academic, behavior, social, and emotional outcomes) in the middle school setting. I sought to address these needs in the literature by creating distinct configurations based on ICPs through a decision rule process as SWD transition to middle school, measuring distal outcomes related to membership in those configurations, and investigating process variables that are connected to these outcomes and student trajectories. By identifying developmental pathways and their connections to 6^{th} and 7^{th} grade outcomes, interventions can be individualized to intervene more efficiently and effectively and help ensure SWD finish middle school successfully with the tools needed to be efficacious moving forward.

Chapter 3

Method

Research Design

The current study was part of a larger cluster randomized control trial designed to evaluate the efficacy of the Behavior, Academic, and Social Engagement (BASE) Project (Dawes et al., 2019). This is a comprehensive professional development and universal classroom management program that focuses on academic engagement, behavior management, and classroom social dynamics through directed consultation. Directed Consultation is a coaching model that guides and supports teachers in their implementation of EBPs with consideration for contextual and environmental factors in the classroom (Motoca et. al, 2014). It involves the use of observations, data collection, professional development trainings, online modules, and implementation meetings with a trained intervention specialist. Directed consultation seeks to bridge the gap between research and educational practices by being responsive to real world conditions and responsibilities experienced by teachers. (Farmer, et al., 2013).

The efficacy study (Dawes et al., 2019) used a cluster randomized controlled trial design wherein matched pairs of schools were recruited for participation. One of each pair was then randomly assigned to the intervention or control condition. The BASE program was implemented during either the 2013–2014, 2014–2015, or 2015–2016 school year with teachers and students who consented to participate in the research study. Teachers consented to participating in directed consultation observations and coaching meetings, along with completing various measures related to student characteristics, their self-efficacy, and social validity of the intervention. Students consented to completing measures related to their school experiences, including academic, behavioral, social, and emotional experiences. Teacher and student reported

data were collected during the fall and spring semester of 6th grade and student data was again collected with the same participants in the fall and spring semester of 7th grade at the conclusion of intervention training.

Participants

Among the 24 schools in the larger efficacy study, two schools were used for analysis for this study. These schools serve students in 6th through 8th grade, and are located in the metropolitan area of a single state in the Southeastern United States. Student enrollment in the schools ranged from about 850 to 900. On average, 74% of students were at or above proficiency for reading, and 48-59% were at or above proficiency for math. Both schools were similar in student consent rates, gender, ethnicity, disability status, and recipients of Free and Reduced Lunch (FRL) across the four waves of data collection; therefore, averages were used to describe the composition of the schools by these variables. The efficacy study followed students from 6th to 8th grade. At the start of the study, all 6th grade students in regular education classrooms were invited to participate and 82.3% consented. Of consenting students, majority identified as male (54%). Participants were diverse in terms of ethnicity with 36% being White, 35% Black, 19.7% Hispanic, 6.5% Multiracial, and 2.5% Asian. About half (50.5%) of participating students received FRL, while 17% received services for a disability. These demographic characteristics remained stable through the duration of the study.

For the present study, the first two research aims used all consenting students in the sample. To address the third research aim, I only used students identified with a disability for analysis. However, information regarding specific disability classifications (i.e. receiving services for LD, emotional disorder, other health impairment, etc.) was not available. Table 1 highlights demographic characteristics of the SWD sub-sample. This subsample was similar to the larger

sample with majority identifying as male and White, and about half of the students in this group received FRL.

Table 1

Students with Disabilities' Demographics

	n	%
School		
A	38	48.05
B	40	51.95
Gender		
Male	53	67.53
Female	25	32.47
Ethnicity		
White	33	41.56
Black	27	35.06
Hispanic	13	16.88
Asian	2	2.6
Multi-Racial	3	3.9
Receives FRL		
Yes	44	55.84
No	34	44.16

Procedures

For each wave, consented students were gathered in the cafeteria or similar area of their school and were assured their participation was confidential, voluntary, and could be withdrawn at any time. Then, adhering to established protocol, a trained staff member led a group administration as students individually responded to surveys measuring their perceptions of peers in their grade and the overall school climate. Project staff circulated among participants, answering questions as needed. Students received school supplies for their participation. Teachers completed survey packets that included items about their own experiences and

background as well as about participating students' academic, behavior, social, and emotional characteristics. Teachers were compensated financially for their participation.

Measures

Various school, teacher, peer, and self-report measures were used to create the indicator variables (i.e. the variables used to indicate student adjustment), outcome variables in the academic, behavioral, social, and emotional domains of school functioning, and process variables.

Indicator Variable – Decision Rules

The Interpersonal Competence Scale Teacher report (ICS-T; Cairns et al., 1995)

This measure is a survey comprised of 18 items with a 7-point Likert-type scale (with three anchors: *Always*, *Sometimes*, *Never*) that asks teachers to assess each student's academic, social and behavioral adjustment through questions assessing academic competence (good at spelling, good at math), aggression (always argues, gets in trouble, always fights), affiliation (always smiles, always friendly), popularity (popular with boys, popular with girls, lots of friends), Olympian (good looking, good at sports, wins a lot) and internalizing behavior (very shy, always sad, always worries). Important for the current study, this measure has been used extensively in PCA studies, including both cluster analytic and LPA, to identify distinct interpersonal competency risk configurations. Students typically fit into five general interpersonal competency configurations: *Model* (i.e. above average scores in academics and popularity with low scores in aggression and internalizing), *Passive* (i.e. above average scores in internalizing and below average scores in academic, popularity, and aggression), *Tough* (i.e. above average scores in aggression, average to above average scores in popularity and academics, and below average scores in aggression), *Troubled* (i.e. above average scores in

aggression, below average scores in academics and popularity, and average to above average scores in internalizing)*, and Neutral* (i.e. average scores across factors; Chen et al., 2019; Estell et al., 2007; Farmer et al., 1999; Farmer et al., 2008; Farmer et al., 2009).

These configurations have predicted various educational outcomes including school grades, school failure, discipline problems, clinical behavioral adjustment problems, teen parent, school dropout, and criminality (Cairns & Cairns, 1994; Estell et al., 2008; Farmer et al., 2008; Farmer et al., 2009; Farmer et al., 2004; Gest et al., 1997; Mahoney, 2000). Prior research has established the ICS-T's convergent validity with direct observation, student records (i.e., grades, discipline reports), and peer nomination (e.g., Cadwallader et al. 2003; Cairns and Cairns 1994; Cairns et al. 1988; Gest et al. 2003; Rodkin et al., 2000) and it has predictive validity over eight year period for adult adjustment, school dropout, and teenage parenthood (Cairns and Cairns 1994; Farmer et al. 2003; Gest et al. 1999; Mahoney et al. 2003). Additionally, the measure has moderately high test-retest reliability (α = .80-.92; Cairns et al., 1995). The ICS-T yields scores in individual adjustment categories and overall average score with higher values indicating a stronger association to that category.

Indicator Variable – Prodigal Analysis

Peer Behavioral Assessment

In order to assess classmates' perceptions of peers' behavioral characteristics, students nominate up to three of their peers on each of 19 behavioral descriptors. Students are instructed to name up to three of their peers for each behavioral descriptor and are told that they may name the same person for more than one descriptor and that they may nominate themselves. The items are cooperative, athletic, starts fights, leader, cool, disruptive, good student, gets in trouble, shy, seeks help, popular, sad, friendly, bully, picked on, starts rumors, trend setter, gets their way, and

like to be. Each item is accompanied by a descriptor (e.g., Cooperative: "Here is someone who is really good to have as part of your group, because this person is agreeable and cooperative-pitches in, shares, and gives everyone a turn."), which is designed to promote students' comprehension and minimize negative conceptions of peers (Farmer & Rodkin, 1996). This measure has shown moderate to high test-retest reliability (e.g., .46 -.88; Farmer et al., 1999).

Process Variables

Student Reported

Student reported variables will be used to measure students' perceptions of various aspects of the school climate including *school belonging*, *school involvement*, *emotional support for participation*, *emotional risk of participation*, *peer protection from bullying*, and *peer encouragement of bullying*.

School Belonging. School belonging is measured using Hagborg's (1998) *Psychological Sense of School Membership-Brief (PSSMB)* scale. Designed as a brief version of Goodenow's (1993) PSSM, the PSSM-B includes 11 items that focus on the affective connection students feel toward their schools. The PSSM questionnaire was developed to evaluate students' sense of belonging or psychological membership in the school or classroom, which is defined by Goodenow (1993) as "the extent to which students feel personally accepted, respected, included and supported by others in the school social environment" (pp. 60–61). Students rate their agreement with statements on a 5-point response scale ranging from one (C*ompletely False*) to five (C*ompletely True*). Items on the survey measure a sense of belongingness in relation to school community in general (e.g., "I feel a real part of my school"), as well as perceived support from teachers (e.g., "Most teachers at my school are interested in me.") and peers (e.g., "Other students like the way I am."). An average of a student's responses to the 11 items on this scale is

computed as an index of the student's sense of school belonging with higher scores on this index indicating higher levels of belonging. Hagborg (1998) found that the PSSM-B demonstrated high internal consistency. Cronbach's alpha for the scale has ranged from .71-.88 across diverse samples of early adolescents (e.g., Hagborg, 1998; Hamm & Faircloth, 2005; Hamm, et al., 2011). Strong re-test reliability has also been demonstrated (= .78; Hagborg, 1998).

School Involvement. The measure of school valuing was adapted from the 16-item *Identification with School Questionnaire* (Voelkl 1996) and includes seven items that reflect feelings of valuing school and school-related outcomes. Students rate their agreement with statements such as "School is one of the most important things in my life" on a 5-point response scale where 1 = strongly disagree and 5 = strongly agree. An average of a student's responses to the seven items on this scale is computed as an overall index of the student's perceived valuing of school. Higher scores on this index indicate higher value placed on school. Construct validity for the scale has been established through high correlations with academic achievement and class participation (Finn and Frone 2004; Voelkl 1996).

Emotional Support for Participation. The two –item measure for student emotional support was adapted from Torsheim, Wold, and Samdal (2000) to assess student perception of emotional support from the teachers in their school. The response options for the two items are arranged on a 5-point Likert-type scale, anchored at one (*strongly disagree*) and five (*strongly agree*). The two items are: 1. Our teachers in this school treat us fairly; and 2. Most of my teachers are friendly. Responses for both items are averaged to provide a score for student perception of teachers' emotional support. This adapted subscale of the emotional support measure has demonstrated high internal validity with a sample of 13-year-old students (= .80; Danielsen et al., 2010).

Emotional Risk of Participation. This is a six-item scale designed to measure perceptions of the emotional risk associated with academic participation (Hamm & Faircloth, 2005). Students are given different prompts then rate their agreement to these items on a six-point scale. Examples of prompts include "If I give a wrong answer to a question in my classes, the following happens:" students are asked to respond to items such as "…other students will think I'm not smart." Response options range from *strongly disagree* to *strongly agree*. An average of a student's responses to the six items on this scale is computed as an overall index of perception of emotional risk associated with academic participation. Higher scores on this index indicate a higher level of perceived emotional risk. Studies of diverse early adolescent samples report Cronbach alpha scores of .75 (Hamm & Faircloth, 2005; Hamm et al., 2008).

Peer Protection and Peer Encouragement from Bullying. The middle school version of the Protective Peer Ecology Scale (Song, 2005) is used to measure three variables: peer protection, peer encouragement of bullying, and peer protector. For the current study, the peer protection and peer encouragement variables were used. The Peer Protection and Peer Encouragement subscales ask students to respond on a 5-point scale (ranging from *Never* to *Always*) to the prompt, "If I'm being bullied…". The Peer Protection subscale (also referred to as *Peer Protection from Bullying*) contains eight items that assess the extent to which students feel that peers would intervene if they were being bullied (e.g., "My peers would tell the others to stop the bullying," and "My peers would talk to me to make me feel better"). The Peer Encouragement subscale (also referred to as *Peer Encouragement of Bullying*) contains 5-items that assesses the extent to which students feel that their peers would encourage the bully (e.g., "My peers would laugh").

The Peer Protection subscale is computed as an average of the eight items that measure a student's perception that peers would intervene if he or she were being bullied. The Peer Encouragement of Bullying subscale is computed by averaging the five items that relate to the perception that peers would encourage the bully. The original elementary school version of the Protective Peer Ecology Scale (Song, 2004, 2006) has demonstrated good psychometric properties in previous studies (Song, 2006; Song & Siegel, 2006a; Song & Siegel, 2007). All subscales have demonstrated good internal consistency; Cronbach's alpha for the Peer Protection subscale has ranged from .92 to .93, and from .85 to .90 for the Peer Encouragement subscale (Song & Siegel, 2006b; Hamm et al., 2011).

Peer Nominated

Sociometric Status. Sociometric status comes from the *Peer Behavior Assessments* described above, and includes scores from the social preference and social impact items (Farmer et al., 1999). Students are instructed to name up to three of their peers for each behavioral descriptor and are told that they may name the same person for more than one descriptor and that they may nominate themselves. Specially, students are asked which same-grade peers that they like most ("Name the three classmates you like the most"), like least ("Name the three classmates you like the least"), and that they would like to be ("If you could be one of your classmates who would you like to be?"). The nominations for liked most and liked least can be used to determine a students' sociometric status. Students with high social preference are considered *popular*, whereas students with low social preference are considered *rejected*. Students with high social impact are considered *controversial*, and those with low social impact are considered *neglected* (Coie et al., 1982).

Outcome Variables

School Reported

Academic.

End of Year Grades. Information about Reading and Math end of year grades was obtained for participating students at the end of their 6th and 7th grade school year from administrative records. Grade average was calculated across core-area courses only to account for variation in student schedules. For the current study, these core classes included math and language arts. The content and difficulty of these classes may vary across students; however, the use of grade averages offered the best solution for comparisons across students and configurations (Estell et al., 2007).

Behavior.

Days Absent and Discipline Suspensions. Participating schools provided this data. Frequency counts for days absent and suspended for each participant was added to the dataset for analysis.

Self Reported

Emotional.

Social Anxiety Subscale of the Screen for Child Anxiety Related Emotional Disorders, Child Version (SCARED). This seven-item subscale was designed as a screening instrument for childhood social phobia for use in both clinical and community settings (Birmaher et al., 1999). It is usually administered as part of the 41-item SCARED scale that also assesses symptoms of panic disorder, separation anxiety disorder, generalized anxiety disorder, and school phobia. Participants are asked to respond to prompts such as, "I feel shy with people I don't know well" on a 3-point scale. Response options range from 0 (*Not True/Hardly True)* to 2 (*Very True/Often*

True). Responses to the seven items are averaged to derive a social anxiety score, with higher scores indicating more anxiety. A meta-analysis of studies utilizing the SCARED with older children and adolescents across seven different countries revealed that the social anxiety subscale consistently emerges as an independent factor with high internal reliability across cultures (mean = .80, range = .75 - .89; Hale et al., 2011). Evidence for broader construct validity includes a moderate negative correlation (*r* = -.51) with social self-efficacy (e.g., perceptions of one's ability to make and keep friends) in a large community sample of adolescents (Muris, 2002).

Strengths and Difficulties Questionnaire: Emotional Symptoms Subscale. The *SDQ (*Goodman, 1997) is a behavioral screening tool for individuals ages 3-16, which is often used in health clinics as part of initial assessment. There are various forms of the *SDQ* for different age groups and raters (e.g., self, teacher, or parent). The 25 items on the *SDQ* load onto five subscales, which are constructs of different psychological attributes: emotional symptoms, conduct problems, hyperactivity/inattention, peer relationship problems, and prosocial behavior. The five-item emotional symptoms subscale from the adolescent student self-report form (*SDQ-S11-17*) was used in this study. Examples of items include "I get a lot of headaches, stomachaches, or sickness" and "I worry a lot". For each of the five items, students respond on a 3-point scale (0 = *Not True*, 1 = *Somewhat True*, and 2 = *Certainly True*). Student scores on the five items are averaged to create an overall score for emotional symptoms.

Internal reliability coefficients for the *SDQ* have been reported as .76 for the Total score as well as .61 for Emotional Symptoms subscale (Goodman & Scott, 1999). The *SDQ* is shown to have concurrent validity with both the *Rutter Scale* and the *Child Behavior Checklist* (*CBCL*). With regard to the emotional symptoms subscale, the SDQ had correlations of .87 (teacher-report) and .78 (parent-report) with the *Rutter Scale* (Goodman, 1997). The *SDQ* to *CBCL*

correlations were also high (Total score □ = .87, Emotional Symptoms score □ = .74; Goodman, Meltzer, & Bailey, 1998). Emotional symptoms subscale inter-rater correlations were .41 (Goodman, 1997). The test-retest stability of the *SDQ* is also strong, with a 4-6 month alpha coefficient of .62 (Goodman, 2001).

Data Analysis

Research Aim 1

In Research Aim 1, I first sought to create a decision rule process practitioners can use to classify students in ICPs based on the students' scores on the teacher completed ICS-T. Decision rules for student placement were based on the characteristics of the five established configurations (i.e. Model, Passive, Tough, Troubled, and Neutral) and the ICS-T-factor cutoffs described extensively in the ICP configuration literature (Chen et al., 2019; Estell et al., 2003; Estell et al., 2007; Farmer et al., 1999; Farmer et al., 2011). Further, additional literature related to ICP configurations was used to determine exceptions related to SWD (Farmer et al., 1999; Farmer et al., 2008). Before finalizing the decision rules process, non-formal inter-rater reliability was established through discussions and consensus with an advisory board of experts in ICP configurations. Appendix A displays the decision rules used for this study.

Next, participating students' distinct ICPs were identified based on Chen and colleagues (2019) LPA analysis using the six ICS-T factors (i.e., aggressive, academic, affiliative, popularity, Olympian, internalizing; Muthén & Muthén, 2008) from the fall of 6th grade. Within each configuration, students and their corresponding raw ICS-T factor scores were identified. The decision rules were then applied to the existing raw data from Chen et al. (2019) to re-categorize all students in the sample into one of the five established configurations.

I conducted two configural frequency analyses (CFAs) using von Eye's basic program (1990) to test if observed frequencies of students placed in ICP configurations with the decision rule process exceeded the expected frequencies of students in the same configurations based on Chen et al.'s (2019) LPA model. The first CFA tested all students in the sample and the second CFA tested only SWD. Boys and girls configurations were joined for the CFA analysis because the two groups used the same decision rules to be placed into the configurations. For the CFA analyses, two analysis patterns were reported. First, "types" (indicated "+" in Table 2 and Table 3) were reported to show observed patterns that occurred significantly more than expected. Second, "antitypes" (indicated "-" in Table 2 and Table 3) were reported to show observed patterns that occurred significantly less than expected. Overall error rates were controlled using a Bonferroni-adjusted alpha of .005. Within the CFA, a Chi Square analysis was conducted to determine differences between SWD in the samples' placement in the configurations based on using LPA and the decision rule process, and its significance statistic was reported.

Research Aim 2

To address Research Aim 2, first correlational analysis was used to investigate the relation among variables and covariates used for the study. Next, to examine the outcome differences between students with disabilities in different ICP configurations, I employed multiple linear regressions for academic, behavioral, and emotional outcomes at the end of 6th grade (i.e., Wave 2) and the end of 7th grade (i.e., Wave 4) controlling for the following covariates: treatment, gender, disability, minority status, and recipient of FRL. Additionally, I ran interaction effect analysis between ICP configuration placement and disability with the same outcome variables within the multiple regression models. Specifically, outcome variables included: for academics, end of year Reading and Math grades; for behavior, number of days

absent, and number or days suspended, and for emotional outcomes, scores on the SDQ and SCARED measures. Specific social variables were not selected for this analysis because they were analyzed in Research Aim 3.

Research Aim 3

Within a person-centered approach, this aim sought to explore potential mechanisms (process variables) that facilitate developmental patterns in adolescents with disabilities transitioning through middle school. Configurations created by the decision rules were selected to analyze distinct subtypes of students with disabilities' patterns of adjustment from 6th to 7th grade. This decision was made to use the decision rules configurations over those created from the LPA study (Chen et al., 2019) to support the practical implications of the current study's research aims. SWD within specific configurations' Peer Behavior Assessments were then used as indicators of student adjustment from the beginning of 6th to end of 7th grade. These indicators, while different because peers completed them, measured similar ICPs found in the ICS-T. Thus, providing a critical social lens from which to view student adjustment (Estell et al., 2007; Farmer et al. 1999).

Using a prodigal analysis process outlined by Cadwallader (2003), I examined whether students' peer nominated scores in *aggression, internalizing, prosocial, social prominence,* and *picked on* varied by configuration and disability across waves. First, I graphed these scores across four waves on separate graphs (Wave 1 = Fall of 6th grade, Wave 2 = Spring of 6th grade, Wave 3 = Fall of 7th grade, and Wave 4 = Spring of 7th grade). The *x*-axis contained the four waves, and the scale for the *y*-axis was determined based on the highest score on the indicator variables for that configuration. Further, each graph was separated by configuration and gender (e.g. male Tough SWD adaptation was measured with five separate graphs with each graph

measuring a specific indicator variable). In addition to individual SWD scores from each configuration, each graph contained means created from the overall gender population, disability subgroup, configuration subgroup, and students with disabilities within individual configurations (further referred as the "sample group") for each indicator variable. These graphed means provided the figure ground, or foundation of the prodigal analysis, from which trends among these populations and subgroups were identified. This foundational analysis provided insight into how students in the sample compare to other students in the same configurations without a disability (e.g. configuration group), students in different configurations with a disability (e.g. disability group), and the overall gender as a whole (e.g. all boys/girls group). Then, using visual analysis, students that deviated from the four mean group trends were identified as "outliers" (Bergman, 2009).

Finally, I analyzed the outlier students' adjustment and saliency in relation to self-reported and peer-nominated process variables to identify relationships among these variables across the four measurement waves. Specifically, I reviewed the outlier students' perception of *school belonging*, *school involvement*, *emotional support for participation*, *emotional risk of participation*, *peer protection from bullying,* and *peer encouragement of bullying*. Additionally I reviewed peer nominated variables that looked at the student's placement and movement within the social structure of the school. These variables included the student's *sociometric status*, their peer group centrality in the social hierarchy system, and their individual centrality within that group (i.e., social networking data; data only available for Wave 1 and Wave 2). Analysis consisted of comparing individual student means on these process variables to gender group, disability subgroup, configuration subgroup, and sample means. A +/- .30 cutoff was used to compare scores. Scores were considered inline with a group mean if it was within .30 above or

below a mean group score. Scores more than .30 above or below a group mean were considered above or below the group mean respectively.

Chapter 4

Results

Research Aim 1

The decision rules placed all participating students within the five established configurations. The Model configuration contained 55 students (20 boys and 35 girls), the Passive configuration contained 73 students (37 boys and 36 girls), the *Tough* configuration contained 81 students (47 boys and 34 girls), the *Troubled* configuration contained 83 students (55 boys and 28 girls), and the Neutral configuration contained 178 students (93 boys and 85 girls). Table 2 shows the distribution of students placed in one of the five configurations based on the LPA versus the students placed in one of the five configurations based on the decision rules I created. Table 2 shows the distribution of students across the identified teacher-rated ICPs from the LPA and decision rule process. There were statistically significant differences between these processes $\chi^2(16, N = 470) = 711.39$ $p < .001$. All five configurations were identified as types. Specifically, students classified as Model from LPA were more likely to remain Model when applying the decision rules than expected by chance (11.70%; $p < .001$); students classified as *Passive* from LPA were more likely to remain *Passive* when applying the decision rules than expected by chance (15.53%; $p < .001$); students classified as Tough from LPA were more likely to remain Tough when applying the decision rules than expected by chance (17.23%; $p < .001$); students classified as Troubled from LPA were more likely to remain Troubled when applying the decision rules than expected by chance (17.64%; $p < .001$); and students classified as Neutral from LPA were more likely to remain Neutral when applying the decision rules (37.87%; $p < .001$). No antitypes were identified from this analysis.

Table 2

Distribution of All Students Between LPA and Decision Rule Process

Process/ Configuration	Model	Passive	Tough	Troubled	Neutral	Total
Configuration from LPA						
n	116	48	63	48	195	470
%	24.68	10.21	8.97	13.40	41.49	100
Configuration from Decision Rules						
n	$^{+}$55	$^{+}$73	$^{+}$81	$^{+}$83	$^{+}$178	470
%	11.70	15.53	17.23	17.64	37.87	100

Note. Observed frequencies and column percentages are shown in the table above. "LPA"= Latent Profile Analysis; "+" = observed frequency > expected frequency; "–" = observed frequency < expected frequency.

The present study focused on SWD functioning within the established configurations. Additionally, the decision rule process allowed for academic exceptions for SWD. Therefore, I ran an additional CFA to determine if there was significant variability between the LPA model and decision rules' configurations for this group of students. Like the larger sample, decision rules placed SWD within the five established configurations. The Model configuration contained 3 students (0 boys and 3 girls), the Passive configuration contained 8 students (4 boys and 4 girls), the Tough configuration contained 7 students (6 boys and 1 girl), the Troubled configuration contained 15 students (13 boys and 2 girls), and the Neutral configuration contained 45 students (29 boys and 16 girls). Table 3 shows the distribution of SWD across the identified teacher-rated ICPs from the LPA and decision rule process. There were statistically significant differences between these processes $\chi^2(16, N = 78) = 174.32$ $p < .001$. Four configurations were identified as types: Model, Passive, Tough, and Troubled. Specifically, SWD classified as Model from LPA were more likely to remain Model when applying the

decision rules than expected by chance (3.85%; $p < .001$); SWD classified as Passive from LPA were more likely to remain Passive when applying the decision rules than expected by chance (10.26%; $p < .001$); SWD classified as *Tough* from LPA were more likely to remain Tough when applying the decision rules than expected by chance (8.97%; $p < .001$); and SWD classified as *Troubled* from LPA were more likely to remain Troubled when applying the decision rules than expected by chance (19.23%; $p < .001$). No antitypes were identified from this analysis. Further, the Neutral configuration did not yield any significant results.

Table 3

Distribution of Students with Disabilities Between LPA and Decision Rule Process

Process/ Configuration	Model	Passive	Tough	Troubled	Neutral	Total
Configuration from LPA						
n	7	9	7	14	41	78
%	8.97	11.54	8.97	17.95	52.56	100
Configuration from Decision Rules						
n	$^{+}3$	$^{+}8$	$^{+}7$	$^{+}15$	45	78
%	3.85	10.26	8.97	19.23	57.69	100

Note. Observed frequencies and column percentages are shown in the table above. "LPA"= Latent Profile Analysis; "+" = observed frequency > expected frequency; "–" = observed frequency < expected frequency.

Research Aim 2

Due to the nested nature of the data, I originally sought to address this research aim with a series of hierarchical linear models. However, the sample used for this study did not have the power to support that type of analysis. Thus, I ran a series of multiple regressions to accept or

reject the null hypothesis. Prior to analysis, regression assumptions were checked. With the exception of Reading grades in Wave 2 and Wave 4 and Math grades in Wave 2, statistical tests revealed issues with heterokedacticity, multicolinearity, and the distribution of the residuals. Due to these violations, a bootstrapping procedure was applied to the analysis of Math grades in Wave 4 for academic outcome variables, all behavior outcome variables, and all emotional outcome variables.

Descriptive Statistics and Correlational Analysis

Means and standard deviations of the study variables are listed in Table 4 for the outcome variables used in the study split by measurement waves (i.e. Wave 2 and Wave 4). Results from the correlational analyses of demographic, predictor, and outcome variables are presented in Appendix B for Wave 2 and Appendix C for Wave 4. In Wave 2, disability was negatively related to Reading and Math grades and positively related to days absent, SDQ, and SCARED scores. Not accounting for disability, correlational analysis showed students in the Neutral configuration (the reference group) were negatively associated with days absent and days suspended. In Wave 4, disability was associated with decreases in Reading and Math Grades and positively related to number of days suspended. Not accounting for disability, correlational analysis showed students in the Neutral configuration shared a positive relationship with Reading and Math grades while continuing to be associated with decreased days absent and suspended.

Table 4

Descriptives for Outcome Variables

Outcome	Observations	*M*	*SD*	Min	Max
		Wave 1			
Academic					
Math Grades	462	444.671	46.26102	308	600
Reading Grades	460	428.3326	59.99009	260	592
Behavior					
Days Absent	404	6.410891	7.148512	0	49
Days Suspended	404	0.6683168	2.795581	0	26
Mental Health					
SDQ	467	0.5862647	0.5089666	-1.264283	2
SCARED	467	0.8538382	0.5276324	-0.6134639	2
		Wave 2			
Academic					
Math Grades	397	433.6071	53.13777	280	600
Reading Grades	395	437.7038	49.8233	251	600
Behavioral					
Days Absent	404	9.39604	8.877808	0	57
Days Suspended	404	0.6732673	2.421405	0	25
Emotional					
SDQ	352	0.63	0.52	0	2
SCARED	352	0.87	0.55	0	2

Note. Variable measures SDQ = Strengths and Difficulties Questionnaire and SCARED = Screen for Child Anxiety Related Disorders

Main and Interaction Effects

As shown in Tables 5, 6, and 7, significant differences among configurations in addition to SWD in different configurations were found with academic, behavioral, and emotional outcomes. For academic outcomes, disability (W2: b = –46.66, $t(458)$ = -4.19, $p < .001$; W4: b = –29.46, $t(393)$ = -2.86, $p < .01$) and membership in the Tough configuration (W2: b = –6.76, $t(458)$ = -.83, $p < .001$; W4: b = –14.92, $t(393)$ = -2.05, $p < .05$) significantly predicted lower reading grades in Wave 2 and Wave 4. The interaction of students with disabilities in the Tough configuration significantly predicted lower Reading grades in Wave 4 (W4: b = –41.91, $t(393)$ = -.77, $p < .05$;). These variables explained a significant proportion of variance in Reading grades in Wave 2 (adjusted R^2 = .14, $F(13, 444) = 6.56$, $p < .001$) and Wave 4 (adjusted R^2 = .13 $F(13, 444) = 5.60$, $p < .001$).

Student membership in the Troubled configuration significantly predicted lower math grades in Wave 2 (b = –46.66, $t(458)$ = -4.19, $p < .001$) and Wave 4 (b = –21.72, $z(460)$ = -3.21, $p < .001$). Membership in the Tough configuration also significantly predicted lower math grades in Wave 4 (b = -16.43, z(395) = -1.45, $p < .05$). However, the only significant interaction for Math grades occurred for Model SWD. Specifically, this interaction significantly predicted higher Math grades in Wave 4 (b = 55.50, $z(395) = 3.50$, $p < .001$). These variables explained a significant proportion of variance in Math grades in Wave 2 (adjusted R^2 = .09, $F(13, 446)$ = 4.52, $p < .001$) and Wave 4 (adjusted R^2 = .11, $Wald(13) = 75.09$, $p < .001$).

Table 5

Regressions of Academic Outcome Variables with Disability Interaction Effect

Variable	Reading End of Year Grades						Math End of Year Grades					
	Wave 2			Wave 4			Wave 2			Wave 4		
	B	SE	*p*	*B*	SE	*p*	*B*	SE	*p*	*B*	SE	*p*
Configuration												
Model	6.06	9.11	.51	1.35	8.02	.87	.04	7.24	.10	6.31	8.50	.46
Passive	9.78	8.84	.27	9.85	8.10	.23	2.37	6.98	.74	5.60	8.07	.49
Tough	-6.76	8.15	.41	-14.92	7.26	.04*	-8.49	6.49	.19	-16.43	8.08	.04*
Troubled	-4.41	8.55	.61	-2.58	7.64	.74	-21.72	6.76	.00*	-19.80	7.86	.01*
Disability	-46.66	11.14	.00*	-29.46	10.31	.01*	-13.61	8.99	.13	-16.71	9.08	.07
Configuration x Disability												
Model with Disability	3.84	41.66	.93	22.55	35.05	.52	47.35	33.19	.15	55.50	15.87	.00*
Passive with Disability	-25.22	20.07	.21	-14.88	19.28	.44	-14.30	16.02	.37	-16.78	19.39	.39
Tough with Disability	-13.65	22.63	.55	-41.91	21.23	.05*	-27.58	18.08	.13	-22.27	22.49	.32
Troubled with Disability	8.66	18.26	.64	-3.86	16.68	.82	3.02	14.60	.84	-11.29	17.25	.51
Constant	454.20	7.24	.00**	463.64	6.50	.00**	463.1	5.75	.00**	457.9	6.68	.00**

Note. Students classified as Neutral and Neutral with a Disability as reference group. Controlled for treatment, gender, minority status, and FRL; these variables are not listed for brevity.

*$p < .05$. **$p<.01$.

For behavioral outcomes, membership in the Passive or Tough configuration significantly predicated increased absences in Wave 2 (Passive: $b = 2.50$, $z(402) = 2.49$, $p < .05$; Tough: $b = 2.06$, $z(402) = 1.97$, $p = .05$). The interaction between SWD's placement in specific configurations was not a significant predictor for days absent from school. These variables explained a significant proportion of variance with days absent (W2: adjusted $R^2 = .09$, $Wald(13) = 36.96$, $p < .001$ W4: adjusted $R^2 = .06$, $Wald(13) = 36.96$, $p < .001$)

Membership in the Tough configuration significantly predicted increased days suspended from school in Wave 2 ($b = 1.63$, $z(402) = 2.74$, $p < .01$) and membership in the Troubled configuration significantly predicted increased days suspended from school in Wave 4 ($b = .82$, $z(402) = 1.83$, $p < .05$). However, only the interaction of Tough SWD significantly predicted an increased number of days suspended in Wave 4 ($b = 5.90$, $z(402) = 2.61$, $p < .01$). These variables explained a significant proportion of variance with days suspended (W2: adjusted $R^2 = .05$, $Wald(13) = 31.03$, $p < .001$; W4: adjusted $R^2 = .14$, $Wald(13) = 36.73$, $p < .001$)

Table 6

Regressions of Behavioral Outcome Variables with Disability Interaction Effect

Variable	Days Absent						Days Suspended					
	Wave 2			Wave 4			Wave 2			Wave 4		
	B	*SE*	*p*	*B*	SE	*p*	*B*	*SE*	*p*	*B*	SE	*p*
Configuration												
Model	-.12	.89	.89	-.01	1.32	.99	-.02	.22	.93	.01	.21	.95
Passive	2.50	1.00	.01**	.98	1.48	.51	-.20	.19	.30	-.12	.13	.35
Tough	2.06	1.05	.05*	1.19	1.36	.38	1.63	.59	.00**	.76	.42	.07
Troubled	1.09	1.12	.59	.38	1.52	.80	.49	.43	.25	.82	.39	.03*
Disability	2.17	1.68	.20	-1.14	1.41	.42	-.33	.20	.10	-.18	.13	.16
Configuration x Disability												
Model with Disability	22.60	13.85	.10	8.52	5.18	.10	.50	.38	.18	-.03	.26	.90
Passive with Disability	-1.74	4.24	.68	5.76	5.62	.31	.34	.30	.25	.90	.88	.31
Tough with Disability	.15	2.77	.96	5.69	3.32	.09	.27	.95	.77	5.90	2.26	.01**
Troubled with Disability	-1.27	3.20	.69	3.89	2.79	.16	1.40	1.17	.23	1.01	.99	.31
Constant	4.46	.79	.00**	10.11	7.75	.00**	.03	.22	.90	-.03	.20	.87

Note. Students classified as Neutral and Neutral with a Disability as reference group. Controlled for treatment, gender, minority status, and FRL; these variables are not listed for brevity.

*$p < .05$. **$p<.01$.

For emotional outcomes, more significant interactions were present. Disability significantly predicted more emotional problems with higher scores on the SDQ in Wave 2 (b = .18, $z(465) = 2.06$, $p < .05$). Yet, both Passive SWD (b = .34, $z(465) = 2.37$, $p < .05$) and Troubled SWD (b = .45, $z(465) = 2.74$, $p < .01$) significantly predicted increased SDQ scores in Wave 2. These variables explained a significant proportion of variance with SDQ scores in Wave 2 (adjusted R^2 = .05, $Wald(13) = 83.85$, $p < .001$). No significant predictors related to disability, configuration membership, or the interaction of disability and membership were present in Wave 4.

Further, no significant predictors related to disability, configuration membership, or the interaction of disability and membership were present for SCARED scores in Wave 2. Disability was not a significant predictor of SCARED scores, but membership in the Passive configuration significantly predicted increased social anxiety with higher scores on the SCARED measure in Wave 4 (b = .24, $z(351) = 2.14$, $p < .05$). Only SWD in the Tough configuration significantly predicted increased SCARED scores in Wave 4 (b = .44, $z(351) = 1.95$, $p < .05$). These variables explained a significant proportion of variance with SCARED scores in Wave 4 (adjusted R^2 = .09, $Wald(13) = 63.25$, $p < .001$).

Table 7

Regressions of Emotional Outcome Variables with Interaction Effect

Variable	SDQ Score						SCARED Score					
	Wave 2			Wave 4			Wave 2			Wave 4		
	B	*SE*	*p*	*B*	SE	*p*	*B*	*SE*	*p*	*B*	SE	*p*
Configuration												
Model	.03	.08	.66	-.01	.08	.96	.08	.08	.33	.06	.09	.51
Passive	.06	.08	.50	.10	.09	.27	.17	.10	.08	.24	.11	.03*
Tough	-.08	.07	.23	-.10	.08	.22	-.02	.09	.81	-.10	.09	.29
Troubled	-.04	.06	.56	-.03	.08	.71	-/01	.08	.91	.08	.09	.42
Disability	-.18	.09	.04*	-.17	.11	.12	-.05	.10	.61	.05	.12	.69
Configuration x Disability												
Model with Disability	-.09	.16	.57	.17	.75	.82	0	-	-	-.67	.38	.08
Passive with Disability	.34	.14	.02*	.22	.22	.32	.23	.20	.26	.05	.25	.84
Tough with Disability	.34	.19	.08	.15	.24	.54	.44	.25	.08	.45	.23	.05*
Troubled with Disability	.45	.16	.00**	.30	.16	.06	.18	.18	.31	-.06	.19	.77
Constant	.87	.06	.00**	.97	.08	.00**	.10	.08	.00**	.97	.09	.00**

Note. Students classified as Neutral and Neutral with a Disability as reference group. Controlled for treatment, gender, minority status, and FRL; these variables are not listed for brevity. Variable measures SDQ = Strengths and Difficulties Questionnaire and SCARED = Screen for Child Anxiety Related Disorders

*$p < .05$. **$p<.01$.

Research Aim 3

Students placed in the *Model*, *Passive*, *Tough*, and *Troubled* configurations from the first research aim were used for the prodigal analysis. I made this decision because the literature showed the *Model* configuration would be most likely to provide insight into the development of highly adjusted students, while the *Passive*, *Tough*, and *Troubled* students were most likely to be at-risk and in need of intervention to reorganize their developmental pathways (Chen et al., 2019; Estell 2003; Estell et al., 2007; Farmer et al., 2004). Similar variables and characteristics defined the configurations for both the boys and girls in the sample; however, as discussed above, the implications, trends, and adjustment based on these configurations differ between genders. Therefore, the subsequent prodigal analysis was run separately for boys and girls. Figures in Appendices D to J show the graphs used for the prodigal analysis and Tables 8 and 9 provide the raw scores for student reported school climate and peer-nominated social process variables. It should be noted that the *y*-axis scale is not uniform for all of the graphs for the prodigal analysis. The scale for the *y*-axis was determined based on the highest score on indicator variables for that configuration. Due to extreme outlier scores, some graphs (i.e., Appendix F: *Troubled Boys Picked On Item*) had to be adjusted for specific indicator variables.

For the results, I first discuss group trends for the following Peer Behavior Assessments: *aggression*, *internalizing*, *prosocial*, and *social prominence* factors along with the *picked on* item across the study's four measurement waves. Groups used for analysis were all gender, gender with disabilities, gender in a specific configuration, and sample group (e.g. gender with disability in a specific configuration). From these indicator variables, I identified outliers and discussed their variations from these same groups' means on school climate and social process variables. It should be noted no boys with disabilities from this study's sample were placed in the Model

configuration. Therefore, no prodigal analysis was completed for boys placed in that configuration.

Boys Groups' Peer Behavior Assessment Means and Trends

Passive

Variable patterns emerged with *Passive* boys. The defining features of the decision rule process for this group was high *internalizing* scores on the ICS-T, lower scores in *aggression*, and lower scores in *prosocial*, and *social prominence* factors. Therefore, it was expected the configuration and sample groups would have the lowest peer nominated scores in *aggression* and highest scores in the *internalizing* factor. The sample mean showed the lowest rates of *aggression* (W1 = 0.38, W2 = 0.39, W3 = 0.17, W4 = 1.04). Configuration means for *aggression* were stable and low (W1 = 0.94, W2 = 0.96, W3 = 0.61, W4 = 0.77), followed by the all boys group (W1 = 3.71, W2 = 4.03, W3 = 3.23, W4 = 3.21). Boys with disabilities struggled more with this factor with the highest means on *aggression* (W1 = 5.64, W2 = 6.02, W3 = 3.58, W4 = 4.14. Interestingly, the configuration group had the highest mean for *internalizing* (W1 = 4.57, W2 = 5.45, 2.15, W4 = 2.97); however, the sample had the lowest means across the four waves (W1 = 0.71, W2 = 1.66, W3 = 1.57, W4 = 1.98). In between these two groups and relatively close together were the disability (W1 = 3.29, W2 = 2.81, W3 = 2.94, W4 = 2.80) and all boys (W1 = 2.37, W2 = 2.49, W3 = 1.99, W4 = 2.10) group means. The sample mean also showed the lowest rates of *picked on* (W1= 0, W2 = .98, W3 = 0, W4 = 0;). The configuration mean started with the highest scores on the *picked on* item, but dropped in Wave 3 and Wave 4 (W1 = 8.07, W2 = 8.08, W3 = 1.39, W4 = 1.88). In the middle, the all boys group scores included: W1 = 6.04, W2 = 5.06, W3 = 5.54, W4 = 4.73, and again, the boys with disabilities struggled more

with this item with high means on the *picked on* item (W1 = 6.33, W2 = 6.02, W3 = 12.54, W4 = 9.19).

The sample group struggled more with the *prosocial* (W1 = 7.03, W2 = 1.94, W3 = 2.07, W4 = 2.32) and *social prominence* (W1 = 4.08, W2 = 1.46, W3 = 1.46, W4 = 0.21) factors. With both factors, this group started higher in Wave 1, then dropped significantly in Wave 2, and remained stable for the rest of the waves. However, sample means showed this group had overall higher levels of *prosocial* and *social prominence* peer nominations than the configuration group (*prosocial*: W1 = 3.84, W2 = 3.29, W3 = 3.21, W4 = 3.54; *social prominence*: W1 = 1.56, W2 = 1.16, W3 = 0.82, W4 = 1.09). Boys with disabilities means showed *prosocial* scores (W1 = 2.97, W2 = 2.37, W3 = 2.08, W4 = 2.28) more in line with the boys mean (W1 = 5.11, W2 = 4.39, W3 = 3.28, W4 = 3.33) than the other means. This was not the case for the *social prominence* scores. The students with disabilities mean was one of the lowest (W1 = 4.13, W2 = 3.50, W3 = 2.43, W4 = 2.02) while the all boys mean was the highest (W1 = 6.08, W2 = 6.07, W3 = 4.45, W4 = 4.26).

Tough

High scores in *aggression* and low scores in *internalizing* factors on the ICS-T primarily characterized the Tough configuration in the decision rule process. Peer behavior nominations for Tough boys confirmed these characteristics. However, there was large variability with key factors. With the *aggression* factor, the sample group had considerably higher means than any other group (W1 = 30.74, W2 = 27.57, W3 = 13.07, W4 = 12.43). Yet, this group had a high rate of variability and a distinct downward trend from Wave 1 to Wave 4. The configuration and disability groups had the next highest means in Wave 1 and Wave 2 (configuration: W1 = 10.34, W2 = 11.34, W3 = 5.11, W4 = 5.05; disability: W1 = 5.64, W2 = 6.02, W3 = 3.58, W4 = 4.15)

but moved inline with the all boys average by Wave 3 (W1 = 3.71, W2 = 4.03, W3 = 3.23, W4 = 3.21). *Internalizing* scores showed different trends among all group means with configuration (W1 = 1.95, W2 = 2.10, W3 = 1.50, W4 = 1.33) being the lowest, followed by all boys (W1 = 2.37, W2 = 2.49, W3 = 1.99, W4 = 2.10), then sample (W1 = 2.63, W2 = 1.42, W3 = 1.93, W4 = 3.02), and the highest scores were from the disability group (W1 = 3.29, W2 = 2.82, W3 = 2.94, W4 = 2.80).

A similar pattern between group means was found with the *prosocial* factor. However, with this factor, the all boys group had the highest scores across waves (W1 = 5.11, W2 = 3.39. W3 = 3.28, W4 = 3.33), followed by the configuration (W1 = 3.14, W2 = 2.91, W3 = 3.28, W4 = 1.97), and sample (W1 = 3.19, W2 = 1.26, W3 = 2.62, W4 = 2.38) groups. Boys with disabilities had the lowest scores on this factor (W1 = 2.97, W2 = 2.37, W3 = 2.08, W4 = 2.28). The sample group had higher means than any other group for the majority of the waves in the *social prominence* factor (W1 = 19.61, W2 = 11.97, W3 = 11.97, W4 = 7.07) with a high rate of variability and a distinct downward trend from Wave 1 to Wave 4. Inline with the sample group, the configuration group means were the next highest group (W1 = 11.15, W2 = 13.32, W3 = 11.75, W4 = 8.91). Both the disability and boys group had much lower means and similar patterns with this factor (disability: W1 = 4.14, W2 = 3.31, W3 = 2.43, W4 = 2.02; all boys: W1 = 6.07, W2 = 6.33, W3 = 4.45, W4 = 4.26). Finally, with the *picked on* item, boys with disabilities had the highest scores across waves (W1 = 6.33, W2 = 6.02, W3 = 12.54, W4 = 9.19) followed by the all boys group (W1 = 6.04, W2 = 5.06, W3 = 5.54, W4 = 4.73). The configuration and sample groups had the lowest means across waves, with the configuration group (W1 = 1.72, W2 = 1.66, W3 = 0.50, W4 = 0.78) showing lower scores than the sample group (W1 = 2.88, W2 = 0.93, W3 = 0.90, W4 = 0.91).

Troubled

Based on configuration qualifications for the decision rule process, I expected Troubled boys would have increased levels of *aggression* and *internalizing* scores, with lower scores on the *prosocial* and *social prominence* factors, and higher scores on the *picked on* item. Visual analysis confirmed these trends. With the *aggression* factor, configuration (W1 = 7.38, W2 = 7.21, W3 = 4.65, W4 = 2.93) and sample means (W1 = 6.31, W2 = 7.94, W3 = 4.54, W4 = 6.59) were much higher than the all boys (W1 = 3.71, W2 = 4.03, W3 = 3.23, W4 = 3.21) and disability (W1 = 5.64, W2 = 6.02, W3 = 3.58, W4 = 4.15) means. With the *internalizing* factor, the disability (W1 = 2.37, W2 = 2.49, W3 = 1.98, W4 = 2.10), configuration (W1 = 3.73, W2 = 2.82, W3 = 2.94, W4 = 2.80), and sample group (W1 = 7.04, W2 = 6.07, W3 = 5.80, W4 = 3.81) were above the boys mean (W1 = 2.37, W2 = 2.49, W3 = 1.99, W4 = 2.10), with the sample group being the highest. The *prosocial* factor scores were much lower for the disability (W1 = 2.97, W2 = 2.37 W3 = 2.08, W4 = 2.28), configuration (W1 = 2.66, W2 = 1.99, W3 = 2.55, W4 – 2.68), and sample groups (W1 = 2.36, W2 = 1.20, W3 = 2.80, W4 = 2.47) than the boys mean (W1 = 5.11, W2 = 4.39, W3 = 3.28, W4 = 3.33). Similar trends were found with the *social prominence* factor, with the boys average (W1 = 6.08, W2 = 6.07, W3 = 4.45, W4 = 4.26) being much higher than the disability (W1 = 4. 19, W2 = 3.50, W3 = 2.43, W4 = 2.02) configuration, and sample means (W1 = 1.69, W2 = 1.86, W3 = 1.86, W4 = 3.08). Conversely, on the *picked on* item, the all boys average was the lowest across four waves (W1 = 6.04, W2 = 5.06, W3 = 5.54, W4 = 4.73), with the disability mean being higher (W1 = 6.33, W2 = 6.02, W3 = 12.54, W4 = 9.19). The configuration mean was higher than gender and disability means, with a spike in Wave 3 (W1 = 6.33, W2 = 6.01, W3 = 12.54, W4 = 9.19). The sample mean was the highest for

the *picked on* item and much higher than the other means (W1 = 14.05, W2 = 12.80, W3 = 12.97, W4 = 9.88).

Boy Outliers

The Peer Behavior Assessment group means displayed on Appendices D to F provided the foreground for the prodigal analysis (Bergman, 2003; Cairns & Rodkin, 1997). Boys showing scores indicating outlier characteristics (e.g., students that do not fit the overall trends of the configuration) were selected for further analysis, which included exploring outlier students' scores related to school climate and social process variables. School climate variables for outlier boys are presented in Table 8. Two Passive boys, four Tough boys, and four Troubled boys were selected as outliers.

Table 8

Boys School Climate Process Variable Mean Scores

	School Belonging				School Involvement				Emotional Support				Risk				Peer Protection of Bullying				Peer Encouragement of Bullying			
	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4
All Boys *M*	3.74	3.64	3.27	3.19	4.21	4.09	3.86	3.80	3.75	3.39	3.12	2.91	2.55	2.59	2.87	2.79	3.71	3.57	3.35	3.33	1.54	1.55	1.69	1.79
SWD *M*	3.60	3.44	3.23	3.11	4.15	3.99	3.74	3.92	3.66	3.53	3.05	2.93	2.65	2.60	3.03	2.73	3.60	3.47	3.27	3.26	1.65	1.61	1.66	1.80
Troubled																								
Tr-K	2.73	2.91	2.73	2.91	4.86	4.71	5.00	4.86	4.00	3.00	3.00	3.00	1.83	2.50	3.50	2.50	3.00	2.25	2.88	2.13	1.20	1.40	2.60	1.40
Tr-L	2.73	2.00	2.73	2.36	3.86	3.29	4.00	3.86	3.00	1.00	2.00	1.50	2.67	3.67	2.50	3.50	2.13	3.00	2.00	1.00	1.40	3.00	2.00	1.00
Tr-B	2.73	2.18	1.64	3.09	4.14	4.14	3.50	4.00	1.00	1.00	1.00	1.00	3.83	3.33	3.83	3.17	2.88	4.00	1.07	3.00	1.00	1.00	2.60	3.00
Tr-D	2.82	2.91	3.82	.	4.57	4.43	4.29	.	3.50	3.50	4.00	.	3.83	3.50	2.67	.	4.25	2.50	2.88	.	1.40	1.00	1.00	.
Config. *M*	3.50	3.48	3.28	3.45	4.09	4.01	4.03	4.14	3.82	3.43	3.38	3.50	2.74	2.66	2.86	2.62	3.51	3.48	3.55	3.51	1.70	1.61	1.69	1.62
Sample *M*	2.92	3.06	2.71	3.05	4.41	3.81	3.81	3.97	3.13	2.94	2.81	2.45	2.90	2.63	2.83	2.58	3.01	3.37	2.71	2.97	1.39	1.65	1.85	1.67
Passive																								
Pa-A	2.45	4.00	.	3.00	4.29	2.86	.	3.14	4.50	3.50	.	3.00	2.50	2.33	.	2.67	3.00	4.00	.	3.00	1.40	1.60	.	3.00
Pa-D	4.36	2.73	.	2.82	4.57	2.29	.	4.43	5.00	3.00		2.00	2.00	1.67		1.17	4.25	2.50	.	2.88	1.40	1.00		1.00
Config. *M*	3.54	3.38	3.08	3.30	4.17	4.05	3.62	3.52	4.07	3.68	3.50	2.96	2.81	2.69	2.65	2.65	3.40	3.35	3.69	3.89	1.61	1.60	1.49	1.65
Sample *M*	3.91	3.86	3.95	3.61	4.29	3.54	4.07	4.07	4.38	3.75	4.25	3.63	2.13	2.08	2.00	2.00	4.03	3.66	4.25	4.13	1.20	1.20	1.10	1.55

	School Belonging				School Involvement				Emotional Support				Risk				Peer Protection of Bullying				Peer Encouragement of Bullying			
	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4
Tough																								
To-A	4.09	3.73	4.55	3.27	4.14	3.71	3.29	4.57	3.50	2.50	2.50	1.50	2.83	3.50	2.67	3.67	3.13	3.63	2.80	2.88	1.60	1.60	3.40	3.80
To-B	2.36	3.54	2.82	.	3.00	3.46	2.57	.	1.50	.	1.00	.	4.67	1.91	6.00	.	2.38	4.68	3.75	.	1.60	2.81	1.60	.
To-C	3.88	4.36	.	3.27	4.08	4.57	.	4.71	.	5.00	.	4.00	2.42	1.67	.	1.33	4.00	2.75	.	4.00	1.75	1.20	.	1.80
To-D	4.64	4.45	2.18	2.40	4.86	4.29	4.14	4.57	5.00	5.00	3.50	4.00	4.00	2.33	4.33	6.00	4.75	3.00	2.88	3.13	1.60	1.40	3.60	1.60
Config. *M*	3.83	3.59	3.23	3.25	4.18	3.98	3.92	3.67	3.61	3.03	2.97	2.96	2.47	2.61	3.18	2.99	3.77	3.49	3.11	3.22	1.57	1.71	2.20	2.13
Sample *M*	3.87	4.12	3.18	2.98	4.16	4.25	3.33	4.62	2.80	3.88	2.33	3.17	3.43	2.24	4.33	3.67	3.44	3.71	3.14	3.33	2.12	1.64	2.87	2.40

Note. W1 = Wave 1, W2 = Wave 2, W3 = Wave 3, W4 = Wave 4. Config. = Configuration.
. = missing value

Passive

Pa-A. In the Passive group, two students were considered outliers. Student Pa-A was selected as an outlier for uncharacteristically low peer nominated scores on *internalizing* behaviors, which is a key factor in this configuration. Although Pa-A displayed overall lower than group mean averages on *internalizing* in all four waves, he showed increases in Wave 2 and Wave 3. Inline with these spikes, Pa-A experienced an increase in Wave 2 on the *picked on* item, while the other waves were below all group means. His *prosocial* factor score was below all group averages in Wave 1 through Wave 3; however, Pa-A's score rose to all boy and configuration averages in Wave 4. His *social prominence* scores were also variable with a steady increase to the all boys group average by Wave 3 then a large drop to 0 in Wave 4. The *aggression* factor remained stable at 0 across all four waves.

Pa-A reported varying levels of school climate perceptions. However, it should be noted this student had missing data in Wave 3 for most process variables. His *school belonging* started at below average levels in Wave 1, increased to scores inline with the sample mean and above the other group average levels in Wave 2, then dropped to a score below the sample mean but inline with the other group means in Wave 4. Conversely, Pa-A started with a score inline with the groups' averages of *school involvement* in Wave 1, and then decreased to below all group level means in Wave 2 and Wave 4. Perceptions of *emotional support* started above the all boys, boys with disabilities, and configuration group means in Wave 1, then his score moved inline with all group averages. This trend continued in Wave 4, with the exception of having perceptions above the sample mean. Perceptions of *emotional risk* were also predominately inline with all the group averages. Scores for this variable were slightly below the configuration mean but inline with the other group means in Wave 1 and Wave 2. In Wave 4, his perceptions of *emotional risk* were

inline with all group means with the exception of being slightly above the sample mean. *Peer protection and encouragement for bullying* scores were more variable. *Peer protection for bullying* showed a score below all boys, boys with disabilities, and sample means, and a score inline with the configuration mean in Wave 1, above all group means in Wave 2, then below all group means with the exception of being inline with the boys with disabilities group mean in Wave 4. For *peer encouragement for bullying*, the score was inline with all groups in Wave 1, a similar trend in Wave 2, with the exception of being slightly above the sample mean, then below all group means in Wave 4. For *sociometric status*, Pa-A switched between Neglected in Wave 1 and Wave 3 and Average in Wave 2 and Wave 4. Further, social networking data showed in Wave 1, Pa-A was in a secondary group as a peripheral member then moved to a peripheral group as peripheral member in Wave 2.

Pa-D. The other outlier in this configuration, Pa-D, was selected for variable and uncharacteristic peer nominated behaviors. Pa-D showed low levels of *internalizing* scores in Wave 1 through Wave 3. However, in Wave 4, his score moved to above all group averages. A similar pattern was found with the *aggression* factor. In Wave 1 through Wave 3, Pa-D scored 0, but in Wave 4, he scored above the configuration and sample means while being below the all boys and boys with disabilities' means. Although the *picked on* item remained stable at 0 for all four waves, variable results were found with the *prosocial* and *social prominence* scores. For these factors, Pa-D started above all group averages in Wave 1 then dropped to 0 for Wave 2 though Wave 4.

Self- reported process variables showed fluctuating yet consistent patterns of perceptions of the school climate. Unfortunately, as with Pa-A, student Pa-D does not have data for these variables in Wave 3. For *school belonging*, scores start above all other group mean averages in

Wave 1, then dropped to below all other group averages in Wave 2 and Wave 4, with the exception of just being inline with the boys with disabilities mean in Wave 4. A similar pattern was present for *school involvement*. In Wave 1, his score was just inline with the sample mean and above the other group means. In Wave 2, his score was below all group means, but then moved to above all group means in Wave 4. Continuing with this trend, Pa-D's scores in *emotional support* showed in Wave 1 a score above all group means, then below all average scores in Wave 2 and Wave 4. *Emotional risk of participation* perceptions remained below group mean averages in all four waves. Similar to the last two variables, scores for *peer protection from bullying* followed the pattern of above average scores in Wave 1, with the exception of being inline with the sample group, and below average scores in Wave 2 and Wave 4. Scores for *peer encouragement for bullying* were inline with all group averages in Wave 1, and in Wave 2 and Wave 4, his score was below the other group averages. For social process variables, *sociometric status* data indicated Pa-D started as neglected in Wave 1 and rejected in Wave 2, then rose to average in Wave 3 and Wave 4. Social network data was only available for Wave 1, but showed at the start of sixth grade this student was in a nuclear group as a peripheral member.

Tough

To-A. Four outliers for the *Tough* configuration emerged from the indicator graphs. To-A fits the profile of a student in the *Tough* configuration; however he was selected as an outlier because he displayed large score increases on *internalizing* characteristics, which is not common for this configuration. In the *aggression* factor, he started with high scores around the configuration average, but well below the sample mean in Wave 1. In Wave 2, his score increased, but was still inline with the configuration mean and below the sample mean. To-A's score dropped slightly in Wave 3, putting it below the sample mean but above the other group means. His score

then increased in Wave 4 to a similar score found in Wave 2, which put it above all four group means. He also experienced large increases in the *internalizing* factor in Wave 4. To-A received above average scores compared to all boys, the configuration, and sample means in Wave 1. However these scores dropped to below all group means in Wave 2 and Wave 3. Wave 4 showed a large increase that put him above all group means on this factor. Overall, To-A had very low scores on the *prosocial* factor compared to other group means. With *social prominence*, To-A had very high scores, well above all group means at Wave 1. At Wave 2 and Wave 3 these means dropped, but still remained above all other group means. In Wave 4, this student's score dropped to below the configuration average; however, his scores were still higher than the all boys, boys with disabilities, and configuration means. For the *picked on* item, he started with an average inline with group means in Wave 1 then dropped to 0 in Wave 2 through Wave 4.

School climate perceptions indicated To-A had average to above average scores in *school belonging*. In Wave 1, his score was inline with the sample and configuration group means and above the all boys and boys with disabilities means. In Wave 2, his score was inline with all of the group means with the exception of being below the sample mean. In Wave 3, his score moved to above all group means, and then went back to being inline with group averages in Wave 4. Variable scores were present with perceptions related to *school involvement*. To-A's score was inline with group averages in Wave 1. In Wave 2, his score was below the sample group average but inline with the other groups' averages. Conversely, in Wave 3, his score was inline with the sample group mean and below the other group means. In Wave 4, his score stayed inline with the sample but moved to above the other group means. Additionally, both *emotional support* and *emotional risk for participation* had variable scores. In *emotional support*, To-A scored above the configuration mean, below the sample mean, and was inline with the other

group means in Wave 1. Then his score moved to above all group means in Wave 2. In Wave 3, he moved inline with the sample group average, but remained below the other groups, and then To-A scored below all group means in Wave 4. To-A started with *emotional risk* scores inline with the all boys and disabilities means, above the configuration mean, and below the sample mean. He moved to above group mean scores in Wave 2. In Wave 3, his score fell to be inline with the all boys group mean and below the other group means. Then, in Wave 4, his score increased to be inline with the sample group, and above the other group means. For *peer protection from bullying*, To-A's scores were inline with the sample group mean and below the other group averages in Wave 1, inline with all group averages in Wave 2, and below all group means in Wave 3 and Wave 4. To-A's *peer encouragement of bullying* score started below the sample group mean and inline with other group means in Wave 1. He gave the same score in Wave 2, but this score put him inline with all group means. In Wave 3 and Wave 4, To-A scores were above all group means. With the social process variables, this student experienced declines with his *sociometric status* going from popular in Wave 1, to rejected in Wave 2, then to controversial in Wave 3 and Wave 4. However, he remained a secondary member in a nuclear social group in both Wave 1 and Wave 2.

To-B. Student To-B was considered an outlier for numerous reasons. First, this student, while having very high *aggression* scores that fit the configuration profile, showed a dramatic decline in *aggression* from Wave 1 to Wave 4. Second, To-B simultaneously demonstrated decreasing levels of *social prominence* from Wave 1 to Wave 4. Finally, he displayed above average *internalizing* scores in Wave 1 and Wave 3, which does not fit the configuration profile. Specifically, To-B started very high and well above all group mean averages in *aggression* in Wave 1, then steadily dropped each wave until reaching sample mean levels at Wave 4. His

overall internalizing scores were relatively high, with higher scores in Wave 1 though Wave 3 that put him above all other group averages, and a drop in his score in Wave 4 that put him inline with all group means. *For social prominence*, To-B also started with very high and above average group mean scores in Wave 1, then this score dropped in Wave 2 and Wave 3, but remained above all group means, and then finally dropped to below all group means with the exception of the boys with disabilities group mean in Wave 4. To-B's *prosocial* scores started inline with the group averages in Wave 1, but then dropped to 0 in Wave 2, below all group means in Wave 3, and back to 0 in Wave 4. A similar pattern with *picked on* emerged. To-B started with a score above all group averages then moved to 0 for Wave 2 through Wave 4.

As with others in the sample, To-B had missing data for school climate process variables in various waves. Specific waves not reported in this section should be considered missing. For this student, his perception of *school belonging* was below all other mean groups in Wave 1 and Wave 3. However, in Wave 2, his scores were in range with all group averages with the exception of being below the sample group mean. Overall, *school involvement* was very low in all three waves with scores below each group's mean. Additionally, To-B showed below mean group averages in *emotional support* in Wave 1 and Wave 3. Conversely, his perceptions of *emotional risk* were higher than group means in Wave 1 and then especially in Wave 3. In Wave 2, his score on this variable was actually higher than the other group means. For *peer protection from bullying*, To-B showed below group average levels in Wave 1, and above group average levels in Wave 2 and Wave 3. To-B scored average to above average scores for *peer encouragement of bullying*; specifically, scores were inline with group averages with the exception of being below the sample group average in Wave 1 and Wave 3 and above all group means in Wave 2. *Sociometrically*, To-B was considered controversial in Wave 1 and Wave 3

and rejected in Wave 2 and Wave 4. Social networking data showed this student moved from being a nuclear member in a nuclear group in Wave 1 to a secondary member of a secondary group in Wave 2.

To-C. Student To-C was selected as an outlier for similar reasons to To-B. Like To-B, To-C demonstrated very high levels of *aggression* at the start of Wave 1 then dropped in Wave 2, but remained above other group means. At Wave 3, his score moved below the sample mean but above all other group means. However, unlike To-B, To-C's score increased again in Wave 4. To-C also received scores higher than group means in *internalizing* from Wave 1 through Wave 3, and then dropped to be inline with all group means in Wave 4. Additionally, both students received high *social prominence* scores in Wave 1 then the scores decreased in Wave 2 though Wave 4, but To-C still remained above all group means across each wave. Conversely, To-C scored very low on *prosocial* factors in all four waves. Further, he scored 0 in all four waves on the *picked on* item.

For the school climate process variables, To-C's Wave 3 contained missing values. Overall, his scores indicated positive perceptions of the school climate. For *school belonging*, To-C started with perceptions inline with the group means in Wave 1, then above group average scores in Wave 2, and back to a score inline with the group averages but above the sample average in Wave 4. His *school involvement* score also started at average levels in Wave 1, and then increased to above group average levels in Wave 2. However, in Wave 4, his *school involvement* score was at the sample mean level and above the other group means. For *emotional support*, To-C displayed above group averages in Wave 2 and Wave 4 (Wave 1 and Wave 3 data are both missing for this score). His *emotional risk* perceptions were also positive. In Wave 1 his score was below the sample mean and inline with all other group means. In Wave 2 and Wave 4, his

scores were below all group means. For *peer protection from bullying*, To-C scored above the disability and sample group means and inline with the all boys and configuration groups in Wave 1, then dropped to below group averages in Wave 2, but jumped back to above all group average scores in Wave 4. For *peer encouragement of bullying*, To-C started slightly above group averages in Wave 1, then dropped to below all group average scores in Wave 2, and moved inline with the all boys and disabilities groups while being below the sample and configuration group means in Wave 4. With the social process variables, he displayed varying *sociometric statuses*. This student was controversial in Wave 1, rejected in Wave 2, average in Wave 3, and rejected again in Wave 4. Social networking data showed in Wave 1, To-C was in a nuclear group as a peripheral member, and then moved to a peripheral group as a peripheral member in Wave 2.

To-D. Finally, To-D was selected as an outlier for very low scores in *aggression*, which is uncharacteristic for this configuration. He scored below group means on this indicator in all four waves. With the *internalizing* factor, he varied from below group means in Wave 1, to a score inline with the boys with disabilities mean in Wave 2, which was above the other group means. In Wave 3 and Wave 4, he was above the configuration mean, but below the other group means. To-D displayed higher *prosocial* scores than the other outliers in this configuration. In Wave 1, his score was inline with the configuration mean but below the other group means. In Wave 2 and Wave 4, he scored above the boys with disabilities, configuration, and sample means, but below the all boys mean. In Wave 3, his scores were above all group means. However, his *social prominence* scores were much lower than the configuration and sample means for all four waves. Specifically in Wave 1, he was below all group means. Then in Wave 2 and Wave 3, he moved to levels inline with boys with disabilities, but below the other group means. In Wave 4 he was

above both the all boys and boys with disabilities mean, but continued to be below the configuration and sample means. Also differing from others in the sample, To-C had low to average scores on the *picked on* item. In Wave 1 and Wave 4 he scored 0, yet in Wave 2 and Wave 3 he had scores above the all boys, configuration, and sample means, only being lower than the boys with disabilities mean.

Process variable scores showed varying trends with To-D's perceptions of the school climate. His *school belonging score* started above the group averages in Wave 1 and Wave 2 but dropped to below group averages in Wave 3 and Wave 4. *School involvement* started with scores above all group means, and then moved to be inline with all group means in Wave 2. In Wave 3, he continued to be inline with the all boys and configuration means but above the sample and boys with disabilities means. In Wave 4, he was inline with the sample mean but above all other group means. This student also displayed positive feelings toward *emotional support for participation,* with very high and above group mean scores in Wave 1 and Wave 2. His scores decreased in Wave 3 and Wave 4, but still remained above all group means. His perceptions of *emotional risk for participation* were more variable but overall above average. In Wave 1, his score was above all group averages. In Wave 2, his score was inline with all group averages. Then the score went back up in Wave 3 to be inline with the sample mean but above the other group means, and then was very high in Wave 4, with a score well above all group averages. For *peer protection from bullying*, To-D started with above group mean scores in Wave 1, but then scored below the group mean scores in Wave 2. His Wave 3 score was inline with the configuration and sample, but above the all boys and boys with disabilities groups. By Wave 4, his score increased to a score inline with all the group averages. *Peer encouragement for bullying* was also variable with scores below the sample mean but inline with the other group means in Wave 1, and a score

slightly below the configuration group mean but inline with other group means in Wave 2. Then his score moved to above group means in Wave 3, and finally dropped to below configuration and sample group means and inline with the all boys and boys with disability group means in Wave 4. With social process variables, To-D's *sociometric status* improved from neglected in Wave 1 and Wave 2 to average in Wave 3 and Wave 4. However, social networking data showed he was considered an isolate in both Wave 1 and Wave 2.

Troubled

Tr-K. Four students emerged from the data as antitypes in the Troubled configuration. Student Tr-K was selected as an outlier because he displayed high scores on several at-risk factors. While these scores were inline with the overall trends of students in the Troubled configuration, Tr-K was selected as an outlier for his extreme scores in *picked on*, *internalizing*, *prosocial*, and *social prominence* factors, signaling a negative adjustment through middle school. Tr-K's scores for both *picked on* and *internalizing* were much higher than all the group means. On the other end of the spectrum, Tr-K's *prosocial* and *social prominence* scores were very low compared to the other group means. His *aggression* score was variable with scores starting off higher than all group averages in Wave 1, increased even higher in Wave 2, then dropped immensely by Wave 3 and Wave 4 to around the all boys and boys with disabilities averages. Although Tr-K showed positive trends in most factors, his scores were still not within any group average ranges.

When comparing Tr-K's self-reported process variable scores to the group means, he showed lower levels of *school belonging*. His scores were inline with the sample mean but below the other group means in Wave 1 through Wave 3, then moved below the configuration mean but inline with the other group means in Wave 4. For *school involvement*, his scores were consistent

across the four waves and were considered above all group means. Perceptions of *emotional support* were variable but in the average range. Specifically, for Wave 1, Tr-K was inline with the all boys and configuration group means, and above the disabilities and sample group means. His score moved inline with the sample but below the other group means in Wave 2. For Wave 3, he was in line with all group means with the exception of being below the configuration group mean. He continued to be inline with the all boys and boys with disabilities group means, but moved to above the sample mean and below the configuration group means in Wave 4. His perceptions of *emotional risk for participation* were also variable but less inline with group averages than perceptions of *emotional support*. This student started with below all group perceptions in Wave 1, moved inline with all group averages in Wave 2, then moved to above all group mean scores in Wave 3, and finally moved back down to be inline with all group mean scores in Wave 4. In Wave 1, Tr-K's score for *peer protection from bullying* was inline with the sample mean but below all the other group means, then moved to below all group levels in Wave 2. In Wave 3, his score put him back inline with the sample mean, but below the other group means, then he moved back to below all group means in Wave 4. His *peer encouragement for bullying* score was inline with the sample mean but below all other groups in Wave 1, inline with all group means in Wave 2, above all group means in Wave 3, and inline with configuration and sample means while being below the all boys and boys with disabilities means in Wave 4. Peer nominated data revealed Tr-K was considered rejected by his peers in all four waves, and was labeled an isolate indicating he is not associated with any peer groups in Wave 1 and Wave 2. Therefore, although his peer nominated behavior scores improved over time, his social status did not change.

Tr-L. Student Tr-L was also selected an outlier for extreme scores on the Peer Behavior Assessments that indicated a negative adjustment through middle school. In particular, this student had very high scores on the *aggression* factor with substantial spikes and dips throughout the four waves, but with all scores being much higher than any other group mean score on the graph. Tr-L also displayed very low scores on the *prosocial* factor during all four waves. Variable scores and placements on the graphs were found with the *internalizing* and *social prominence* factors. On the *internalizing* factor, he showed higher scores in Wave 1 and Wave 4, with Wave 4 being the highest and above all of the group means. In coordination with the *internalizing* factor, this student scored very low on *social prominence* in Wave 1 and Wave 4, but with higher than any other group average level in Wave 2 and Wave 3. Peer nominated scores indicated this student was not *picked on*, except for in Wave 4 he reached the configuration group mean level.

Process variables showed this student had negative perceptions of the school climate. Tr-L's *school belonging* and *school involvement* showed average to below average scores on these constructs. With *school belonging*, his score was inline with the sample, but below all other group means. In Wave 2, his score moved to below all group means, but returned to Wave 1 status with a score inline with the sample group but below the other group means in Wave 3, then returned to a score below all group means in Wave 4. *School involvement* was also variable with a score inline with the boys with disabilities and configuration groups and below the all boys and sample means in Wave 1. His score then dropped to below all group mean scores in Wave 2, but then moved up to be inline with all the group means in Wave 3 and Wave 4. Scores indicated Tr-L had an overall negative perception of the *emotional support and risk for participation* in the school environment. In Wave 1, his emotional support score was inline with

the sample group but below all other group means. Scores below all group means were then present in Wave 2 though Wave 4. Tr-L's perception of the *emotional risk of participation* was slightly better with a variable pattern of scores inline with all group means in Wave 1 and 2, and below all group means in Wave 3 and Wave 4. *Perceptions of bullying* was very negative for this student. This is especially true with Tr-L's perception of *peer protection from bullying*. He had a below all group averages score that continued to drop with each subsequent wave. His perception of *peer encouragement for bullying* was slightly better with a score inline with all group means in Wave 1, but then jumped significantly to above all group means in Wave 2. Tr-L's score then moved to be inline with the sample group while continuing to be above the other group means; however, in Wave 4, his perceptions dropped to below all group means. Variability could also be found with the peer nominated social process variables. Although his *sociometric status* indicated he was rejected at all four waves, he was considered part of a nuclear group in both Wave 1 and Wave 2 with a peripheral status in the group in Wave 1 and a secondary status in Wave 2.

Tr-B. Student Tr-B was selected as an outlier because he demonstrated progress in various factors while simultaneously showing negative organization in other factors. Demonstrating progress, Tr-B's scores in *social prominence* were below all the other group means in the first three waves, but in Wave 4, his score jumped to above all group means. Negatively, his *aggression* scores started inline with the all boys mean then steadily increased to very high scores in Wave 3, with a small dip but still very high score in Wave 4. Both his *picked on* and *prosocial* factors remained low and stable at zero. Tr-B's *internalizing* scores were variable with small jumps in Wave 1 and Wave 4, but even with these jumps, all scores were below the other group mean levels.

Self-reported process variables showed inconsistent perceptions of the school climate, with more negative perceptions found in Wave 3 for many variables. *School belonging* and *school involvement* scores ranged from average to below average. Specifically for *school belonging*, scores at Wave 1 were inline with the sample group but below all other group means. His score moved below all group means in Wave 2 and Wave 3, and then increased to be inline with all group means in Wave 4. Tr-B's *school involvement* started with a score inline with the group means. In Wave 2, his score moved to above the sample group mean while still being inline with the other group means. Wave 3 was more variable with his score being below the all boys and sample group means and inline with the disability and configuration means. Tr-B's score moved back to being inline with all group means in Wave 4. Tr-B's scores were low for perceptions of *emotional support* coupled with increased scores for *emotional risk for participation*. *Emotional support* scores were below all group means in all four waves while *emotional risk* for participation scores were above all group means in all four waves. Following a similar, but negative pattern, scores were low for *peer protection from bullying* and high *for peer encouragement of bullying*. Tr-B's *peer protection for bullying* scores were inline with the sample group and below the other group means in Wave 1. His Wave 2 score was above all group means and his Wave 3 score was below all group means. In Wave 4, his score continued to be below the all boys and configuration group means while moving inline with the disability and sample means. *Peer encouragement of bullying* scores started inline with the sample and below the other group means in Wave 1, dropped to below all group means in Wave 2, then increased to be above all group means in Wave 3 and Wave 4. Social process variables showed variability in Tr-B's *sociometric status*. He moved from neglected in Wave 1, to rejected in Waves 2 and 3,

and then to average in Wave 4. Peer group membership showed in both Waves 1 and 2 this student was a secondary member in a secondary group.

Tr-D. In this same configuration, Tr-D demonstrated outlier characteristics with above all group scores in *picked on* and *internalizing* across measurement waves. While his *social prominence* remained below group averages for all four waves, his *prosocial* factor showed a steady increase in scores from Wave 1 to Wave 3, with average scores in Wave 3, then a drop to below group averages in Wave 4. Additionally, the *picked on* item significantly dropped from Wave 1 to Wave 3 with movement to the configuration mean in Wave 4. Scores on *aggression* were below all other group means, with scores of 0 in Waves 2 and 3, and a slight increase in Wave 4. His *internalizing* score followed a similar trend with a below other group mean averages in Wave 1, scores of 0 in Wave 2 and Wave 3, and a small increase but below other group mean averages in Wave 4.

Self-reported process variables showed variable levels of positive perceptions of the school environment. *School belonging* started inline with the sample group mean and below all other group means in Wave 1 and Wave 2, then moved to above all group means in Wave 3. His *school involvement* was inline with the sample group mean and slightly above the other group means in Wave 1, above all group means in Wave 2, and above all groups with the exception of being inline with the configuration group mean in Wave 3. *Emotional support and risk for participation* scores showed average to above average ranges. Tr-D's *emotional support* scores started inline with the all boys and disability group means, above the sample group, and below the configuration group in Wave 1. In Wave 2, his score remained above the sample group mean, but moved to be inline with all other group means. His score then moved to above all group means in Wave 3. Tr-D's perceptions of *emotional risk for participation* were above all group

means in Wave 1 and Wave 2, and then dropped to below the disability group mean but inline with the other group means in Wave 3. Tr-D started with *peer protection from bullying* scores above all group means in Wave 1, but then dropped to below all group averages in Wave 2, and moved up slightly to be inline with the sample mean but below all other group means in Wave 3. For *peer encouragement for bullying*, his score was inline with all the group means in Wave 1, but then his score dropped to below all group means in Wave 2 and Wave 3. Tr-D's *sociometric status* jumped from neglected in Wave 1 to average in Wave 2 through Wave 4. However, this student was considered an isolate in Wave 1 and Wave 2.

Summary

In general, boys' scores from the Peer Behavioral Assessments aligned with the configurations created with the ICS-T. The configuration means and their placement among different comparison groups in *aggression*, *internalizing*, *prosocial*, *social prominence*, and *picked on* matched with the characteristics of the configuration. While the prodigal analysis confirmed group trends, it also revealed students with disabilities that strayed from configuration group averages. Many of these at-risk outliers showed extreme scores that negatively impacted their developmental trajectory.

Girls Group Means and Trends

Model

The Model configuration was defined by below average scores in *aggression* and *internalizing*, and above average scores in *prosocial and social prominence* on the ICS-T (Chen et al., 2019). Therefore, it would be expected that the Peer Behavioral Assessment would show similar patterns. For the *aggression* factor, overall, the subgroups had lower scores than the all girls group (W1 = 2.32, W2 = 2.80, W3 = 2.16, W4 = 2.74). Group level means indicated

students in the sample group had the lowest scores on *aggression* across all four waves (W1 = .51, W2 = 0, W3 =1.36, W4 = 1.59), followed by the configuration (W1 = 1.83, W2 = 2.33, W3 = 2.75, W4 = 2.40) and girls with disabilities (W1 = 1.85, W2 = 2.10, W3 = 1.52, W4 = 1.45) groups. However, the configuration group showed increases that put it closer with the disability and all girls groups in Wave 3 and Wave 4. The sample (W1 = 1.28, W2 = .65, W3 = 3.11, W4 = 2.27) and configuration (W1 = 1.98, W2 = 2.07, W3 = 2.37, W4 = 1.95) groups also showed the lowest scores on the *internalizing* factor. While both groups remained low, they experienced an increase in scores in Wave 3. The all girls group displayed the next highest scores (W1 = 2.62, W2 = 2.88, W3 = 2.40, W4 = 2.66), and the girls with disabilities group scored the highest across all four waves (W1 = 3.79, W2 = 5.03, W3 = 3.07, W4 = 3.03), with the exception of being lower than the sample group mean in Wave 3. As expected, the configuration displayed the highest scores on the *prosocial* factor (W1 = 11.10, W2 = 11.09, W3 = 8.99, W4 = 7.89) followed by the all girls group means (W1 = 7.48, W2 = 7.48, W3 = 5.82, W4 = 5.35). However, the sample group scores (W1 = 6.41, W2 = 3.04, W3 = 7.16, W4 = 5.67) were variable and fell below the configuration and all girls groups. The girls with disabilities group demonstrated the lowest scores for the *prosocial* factor (W1 = 4.76, W2 = 4.87, W3 = 3.84, W4 = 3.54). All groups showed downward trends in this factor except the sample group. The sample group showed large increases in Wave 3. Similar trends occurred with the *social prominence* factor. The configuration group demonstrated the highest scores (W1 = 7.61, W2 = 7.93, W3 = 5.38, W4 = 4.62) followed by the all girls group means (W1 = 4.75, W2 = 4.77, W3 = 3.30, W4 = 3.45). The sample group mean scores fell below these group means (W1 = 4.81, W2 = 2.60, W3 = 2.97, W4 = 2.55), and girls with disabilities continued to have the lowest scores across the majority of the waves (W1 = 2.64, W2 = 2.77, W3 = 1.74, W4 = 1.70). For the *picked on* item,

the configuration group had the overall lowest scores (W1 = 1.56, W2 = 1.40, W3 = 3.11, W4 = 1.60), the all girls group demonstrated scores inline with the configuration group mean (W1 = 2.27, W2 = 2.44, W3 = 1.92, W4 = 2.14), and the sample group displayed variable scores alternating between above the configuration group means, the all girls group means, and zero (W1 = 3.85, W2 = 0, W3 = 2.26, W4 = 0). As with the other indicator variables, students with disabilities faired the worst with the highest scores on the *picked on* item (W1 = 5.14, W2 = 6.40, W3 = 4.30, W4 = 4.44). However, sample group mean scores for this item remained fairly stable across the four waves.

Passive

The Passive configuration was defined in the decision rule process by above average scores in *internalizing* and below average scores in *aggression* on the ICS-T. The sample group started very high on the *internalizing* factor in Wave 1, dropped in Wave 2, moved to scores inline with other group means in Wave 3, and finally their scores went back up to be inline with the configuration group mean in Wave 4 (W1 = 7.67, W2 = 4.38, W3 = 3.20, W4 = 6.67). The configuration group mean also had high scores in each wave (W1 = 4.50, W2 = 6.13, W3 = 4.47, W4 = 6.97). Disability group mean scores were lower than sample and configuration group means (W1 = 3.79, W2 = 5.03, W3 = 3.07, W4 = 3.03) but above the all girls group mean (W1 = 2.23, W2 = 2.80, W3 = 2.16, W4 = 2.74). Conversely, with the *aggression* factor, the sample group means were the lowest across all four waves (W1 = 0, W2 = 0.59, W3 = 0, W4 = 0). The configuration group also had very low *aggression* scores across all four waves (W1 = 0.81, W2 = 1.21, W3 = .44, W4 = .76). The disability group showed slightly higher scores (W1 = 1.85, W2 = 2.10, W3 = 1.52, W4 = 1.45), and the all girls group means showed the highest scores for each wave measured (W1 = 2.32, W2 = 2.80, W3 = 2.16, W4 = 2.74). All mean groups demonstrated

an overall downward trend with the *aggression* factor. Despite low *aggression* scores, the sample group received the lowest scores on the *prosocial* factor (W1 = 4.17, W2 = 3.52, W3 = 5.09, W4 = 1.98). Girls with disabilities' scores were very similar to the sample mean scores (W1 = 4.76, W2 = 4.87, W3 = 3.84, W4 = 3.54). Further, the configuration group received higher scores (W1 = 4.88, W2 = 5.61, W3 = 6.93, W4 = 6.96), but these scores still fell below the all girls group averages (W1 = 7.48, W2 = 7.48, W3 = 5.82, W4 = 5.35). With the exception of the configuration group, each group displayed a downward trend from Wave 1 to Wave 4 on the *prosocial* factor. The sample group also struggled with *social prominence* compared to the other group means (W1 = 0.24, W2 = 0, W3 = 0.90, W4 = 0.43). Above this group, and with similar scores to one another, were the disability and configuration groups (disability: W1 = 2.64, W2 = 2.77, W3 = 1.74, W4 = 1.70; configuration: W1 = 2.57, W2 = 2.55, W3 = 0.88, W4 = 1.75). The all girls group means remained the highest across all four waves (W1 = 4.75, W2 = 4.77, W3 = 3.30, W4 = 3.45). However, each group showed a downward trend on the *social prominence* factor. Continuing with the downward trend, the sample group started with a very high mean score on the *picked on* item in Wave 1, then decreased to a score of 0 by Wave 4 (W1 = 15.34, W2 = 6.84, W3 = 1.13, W4 = 0). The disability group, which started with a score lower than the sample group, also showed a downward trend with this item (W1 = 5.14, W2 = 6.40, W3 = 4.30, W4 = 4.44). Conversely, the configuration group started with lower scores, but then increased to the highest score by Wave 4 (W1 = 3.95, W2 = 4.82, W3 = 4.84, W4 = 5.01). The all girls configuration remained low and stable from Wave 1 to Wave 4 (W1 = 2.27, W2 = 2.44, W3 = 1.92, W4 = 2.14).

Tough

High scores in *aggression* and low scores in *internalizing* define the Tough configuration on the ICS-T. It is important to note, different from the boys, this configuration only contained one female student. Therefore the sample mean only consisted of one score. Interestingly, this student demonstrated the lowest scores on the peer nominated *aggression* factor (W1 = 0, W2 = 0, W3 = 0, W4 = 0.86). Conversely, the configuration group had the highest mean scores across all four waves, with the exception of a low score in Wave 3 (W1 = 5.41, W2 = 4.84, W3 = 2.72, W4 = 2.87). The next highest was the all girls group (W1 = 2.32, W2 = 2.80, W3 = 2.16, W4 = 2.74). The girls with disabilities group received lower scores than the configuration and all girls group on *aggression* (W1 = 1.85, W2 = 2.10, W3 = 1.52, W4 = 1.45). The sample score also showed uncharacteristically high scores on the *internalizing* factor (W1 = 4.81, W2 = 7.81, W3 = 6.78, W4 = 11.05). The disability group had the next highest scores (W1 = 3.79, W2 = 5.03, W3 = 3.07, W4 = 3.03), followed by the all girls group mean (W1 = 2.62, W2 = 2.88, W3 = 2.40, W4 = 2.66). As expected, the configuration group had the lowest scores for the *internalizing* factor (W1 = 2.15, W2 = 2.79, W3 = 1.70, W4 = 2.28). Trends for this factor were variable but overall remained stable. For the *prosocial* factor, the sample student received the highest scores compared to the other mean groups (W1 = 8.97, W2 = 9.11, W3 = 5.65, W4 = 5.65). The next highest was the all girls group (W1 = 7.48, W2 = 7.48, W3 = 5.82, W4 = 5.35). The configuration and disability groups started with similar scores but the configuration group dropped below the disability group in Wave 3 and Wave 4 (disability: W1 = 4.76, W2 = 4.87, W3 = 3.84, W4 = 3.54; configuration: W1 = 5.41, W2 = 4.84, W3 = 2.72, W4 = 2.87). All the mean groups displayed downward trends for this factor. Despite high *prosocial* scores, the sample student received very low scores for *social prominence* (W1 = 0, W2 = 0, W3 = 1.69, W4

= 0). Conversely, the configuration group received the highest score on this factor (W1 = 6.84, W2 = 6.27, W3 = 4.46, W4 = 6.39), followed by the all girls group (W1 = 4.75, W2 = 4.77, W3 = 3.30, W4 = 3.45). The girls with a disability group received very low scores compared to the other groups for *social prominence* (W1 = 2.64, W2 = 2.77, W3 = 1.74, W4 = 1.70). Scores were variable but remained fairly stable for this factor. Inline with her low social prominence scores, the sample student received the highest scores for the *picked on* item (W1 = 11.54, W2 = 15.63, W3 = 10.17, W4 = 23.81), followed by the disability group (W1 = 5.14, W2 = 6.40, W3 = 4.30, W4 = 4.44). Next, the all girls group received lower scores compared to the sample and disabilities group (all girls: W1 = 2.27, W2 = 2.44, W3 = 1.92, W4 = 2.14), and the configuration group received the lowest scores for this item (W1 = 1.81, W2 = 2.59, W3 = 1.31, W4 = 2.31). The sample group showed increased trends in *picked on* while the other groups' scores remained stable.

Troubled

The Troubled configuration was characterized by high scores in *aggression* and/or *internalizing*, with low scores in *academics* and *popularit*y in the decision rule process. Due to missing data, only one student was used and reported for the sample mean. For *aggression*, the configuration group received the highest scores (W1 = 5.79, W2 = 7.01, W3 = 2.79, W4 = 5.47), followed by the all girls group (W1 = 2.32, W2 = 2.80, W3 = 2.16, W4 = 2.74). However, these two groups showed similar scores in Wave 3. The disability group received the next lowest scores (W1 = 1.85, W2 = 2.10, W3 = 1.52, W4 = 1.45), and similar to the Tough configuration, the sample mean scored the lowest on the *aggression* factor (W1 = 0, W2 = 0, W3 = 0, W4 = 0.68). For the *internalizing* factor, the sample score had the highest overall mean (W1 = 4.81, W2 = 7.81, W3 = 6.78, W4 = 11.05) followed by the girls with disabilities group (W1 = 3.79,

W2 = 5.03, W3 = 3.07, W4 = 3.03). The girls in the configuration group (W1 = 3.05, W2 = 3.43, wW3 = 1.95, W4 = 1.98) and the all girls group (W1 = 2.62, W2 = 2.88, W3 = 2.40, W4 = 2.66) displayed the overall lowest means with this factor. The all girls group started with the lowest scores in Wave 1 and Wave 2 then the configuration group experienced a drop in Wave 3 and Wave 4 that put it below the all girls group means. The sample group received the highest score on the *prosocial* factor across most waves (W1 = 8.97, W2 = 9.11, W3 = 5.65, W4 = 9.07) followed by the all girls group (W1 = 7.48, W2 = 7.48, W3 = 5.82, W4 = 5.35). The configuration and disability group means shared the lowest scores on this factor (configuration: W1 = 3.70, W2 = 3.51, W3 = 4.63, W4 = 4.23; disability: W1 = 4.76, W2 = 4.87, W3 = 3.84, W4 = 3.54). For the first two waves, the configuration group had the lowest scores, and then in last two waves, the disability group had the lowest mean scores. Following a similar pattern for the *social prominence* factor, the all girls group mean demonstrated the highest scores (W1 = 4.75, W2 = 4.77, W3 = 3.30, W4 = 3.45), and the disability and configuration groups received similar level means (disability: W1 = 2.64, W2 = 2.77, W3 = 1.73, W4 =1.70; configuration: W1 = 2.87, W2 = 3.09, W3 = 1.94, W4 = 3.34). However, the sample student received very low scores on this factor (W1 = 0, W2 = 0, W3 = 1.69, W4 = 0). Overall, the mean scores demonstrated a downward trend. The only exception to this trend occurred in Wave 4 when the configuration group average moved up inline with the all girls mean. The *picked on* item also showed variable trends. The sample student showed extremely high scores across all four waves (W1 = 11.54, W2 = 15.63, W3 = 10.17, W4 = 23.81). The girls with disabilities group received the next highest scores (W1 = 5.14, W2 = 6.40, W3 = 4.30, W4 = 4.44). The configuration and all girls means varied with the configuration group showing higher scores in Wave 1 and Wave 2

then moving to below the all girls group in Wave 3 and Wave 4 (configuration: W1 = 3.75, W2 = 4.07, W3 = 0.75, W4 = 1.13; all girls: W1 = 2.27, W2 = 2.44, W3 = 1.92, W4 = 2.14).

Girl Outliers

As with the boys, the group means above provided the foreground for the prodigal analysis (Bergman, 2003; Cairns & Rodkin, 1997). Girls showing peer nominated scores indicating outlier characteristics were selected for further analysis and are presented in Appendices G through J. The *Model* configuration contained three outlier students, the *Passive* configuration contained three outlier students, the *Tough* configuration contained one outlier student, and the *Troubled* configuration contained one outlier student. School climate variables for outlier girls are presented in Table 9.

Table 9

Girls School Climate Process Variable Mean Scores

	School Belonging				School Involvement				Emotional Support				Risk				Peer Protection of Bullying				Peer Encouragement of Bullying			
	W1	**W2**	**W3**	**W4**	**W1**	**W2**	**W3**	**W4**	**W1**	**W2**	**W3**	**W4**	**W1**	**W2**	**W3**	**W4**	**W1**	**W2**	**W3**	**W4**	**W1**	**W2**	**W3**	**W4**
All Girls *M*	3.78	3.64	3.18	3.01	4.30	4.21	3.97	3.91	3.64	3.30	3.08	2.78	2.70	2.81	3.22	3.23	4.06	4.00	3.83	3.58	1.40	1.41	1.52	1.62
SWD *M*	3.61	3.52	3.34	3.09	4.13	4.07	3.99	4.14	3.78	3.70	3.64	3.31	2.92	3.05	3.27	3.21	3.95	3.91	3.45	3.51	1.59	1.55	1.48	1.80
Troubled																								
Tr-N	2.00	2.73	1.27	1.36	4.86	4.00	2.29	4.14	2.50	2.00	2.50	2.50	4.67	5.17	5.33	3.17	4.63	3.88	2.75	5.00	1.50	1.00	2.40	5.00
Config. *M*	3.52	3.36	2.84	2.80	4.23	4.06	3.55	4.00	3.30	2.45	2.75	2.47	2.97	3.23	3.75	2.92	4.06	4.00	3.83	3.58	1.40	1.41	1.52	1.62
Sample *M*	2.36	2.92	1.27	1.36	4.02	3.55	2.29	4.14	2.50	2.00	2.50	2.50	4.47	4.35	5.33	3.17	3.95	3.91	3.45	3.51	1.59	1.55	1.48	1.80
Passive																								
Pa-D	3.18	2.82	2.82	.	4.14	4.86	4.29	.	2.50	4.50	4.00	.	1.33	3.00	2.67	.	5.00	4.50	3.00	.	1.00	1.00	1.60	.
Pa-E	2.55	2.82	.	.	4.43	3.86	.	.	2.50	1.50	.	.	2.17	4.00	.	.	1.88	3.13	.	.	1.00	1.00	.	.
Pa-F	3.64	4.00	3.73	3.09	4.71	4.71	4.00	4.86	5.00	4.50	4.50	4.50	4.00	3.17	4.17	4.33	2.63	4.25	4.88	4.86	3.20	2.00	2.40	1.60
Config. *M*	3.60	3.53	2.82	2.54	4.15	4.22	4.21	3.97	3.71	3.50	3.50	3.06	2.77	2.95	3.75	3.31	4.06	4.00	3.83	3.58	1.40	1.41	1.52	1.62
Sample *M*	2.80	3.29	3.27	3.09	4.02	4.16	4.14	4.86	3.19	3.50	4.25	4.50	3.13	3.12	3.42	4.33	3.95	3.91	3.45	3.51	1.59	1.55	1.48	1.80

	School Belonging				School Involvement				Emotional Support				Risk				Peer Protection of Bullying				Peer Encouragement of Bullying			
	W1	**W2**	**W3**	**W4**	**W1**	**W2**	**W3**	**W4**	**W1**	**W2**	**W3**	**W4**	**W1**	**W2**	**W3**	**W4**	**W1**	**W2**	**W3**	**W4**	**W1**	**W2**	**W3**	**W4**
Tough																								
To-E	4.45	4.45	3.73	2.64	4.29	4.86	3.86	3.86	4.50	5.00	2.50	2.00	2.50	3.17	3.00	4.67	5.00	4.75	2.88	3.00	1.00	1.00	2.00	2.80
Config. *M*	3.69	3.49	3.11	2.78	4.21	4.12	3.80	3.81	3.13	3.00	2.38	2.50	2.68	2.90	2.59	3.12	3.99	3.90	4.05	2.98	1.43	1.49	1.27	1.65
Model																								
Mo-A	3.82	5.23	3.36	3.09	3.00	4.48	3.71	4.00	4.00	.	4.00	1.00	2.33	3.44	2.67	2.00	5.00	5.15	4.88	4.00	1.00	1.80	1.00	1.00
Mo-B	4.64	3.73	3.36	3.27	4.29	3.43	4.00	3.71	4.00	2.50	3.50	3.50	2.50	2.17	2.50	1.83	4.50	5.00	3.75	4.00	1.00	1.00	1.60	1.20
Mo-C	4.00	4.20	3.45	3.36	3.86	4.75	4.00	3.86	4.00	.	4.00	3.50	2.67	2.63	2.67	2.83	3.88	4.03	3.38	3.00	1.00	1.61	1.20	1.00
Config. *M*	3.96	3.79	3.18	2.96	4.40	4.25	4.04	3.76	3.82	3.31	2.92	2.61	2.60	2.67	2.94	3.26	4.15	4.10	4.08	3.74	1.36	1.39	1.32	1.71
Sample *M*	4.15	4.38	3.39	3.24	3.71	4.22	3.90	3.86	4.00	2.50	3.83	2.67	2.50	2.75	2.61	2.22	4.46	4.73	4.00	3.67	1.00	1.47	1.27	1.07

Note. W1 = Wave 1, W2 = Wave 2, W3 = Wave 3, W4 = Wave 4. Config. = Configuration.
. = missing value

Model

Mo-A. Based on placement in the graphs, three students were selected as outliers for the Model configuration. The first outlier, Mo-A, was selected because of uncharacteristically low scores on the *prosocial* factor. On this factor, she scored below all group means in Wave 1, zero in Wave 2, then moved up slightly, but her score remained below all group means in Wave 3, and dropped back to zero in Wave 4. She also displayed very low scores on *social prominence* across all four waves. In Wave 1 through Wave 3, Mo-A scored zero, and then her score increased in Wave 4 to be inline with the girls with disabilities group mean but remained below the other group means. On the other Peer Nominated Behavior Assessment factors, she scored inline with the Model configuration. For *aggression*, she scored zero in Wave 1 and Wave 2, then moved inline with the disability and sample group means and below the all girls and configuration group means in Wave 3 and Wave 4. Mo-A showed variable scores in the *internalizing* factor. In Wave 1 and Wave 2, she was inline with the sample and below the other group means, then in Wave 3 her score moved below all group means. In Wave 4, her score increased to be inline with the girls with disabilities mean and above the other group means. For the *picked on* item, she started with a score inline with the all girls and sample mean scores, above the configuration, and below the girls with disabilities group mean in Wave 1. Then she scored zero in Wave 2 through Wave 4.

Process variables indicated inconsistent perceptions of the school climate. With *school belonging*, Mo-A demonstrated scores lower than the sample group mean but inline with the other group means in Wave 1, above all group means in Wave 2, and inline with all group means in Wave 3 and Wave 4. For *school involvement*, her scores were below all group means in Wave 1, above the disability group and inline with the other group means in Wave 2, below the

configuration and inline with other group means in Wave 3, and inline with all group means in Wave 4. Mo-A had missing data for *emotional support for participation* in Wave 2 but scored above the all girls group mean and inline with other groups in Wave 1, inline with group means in Wave 3, and then dropped drastically to below all group means in Wave 4. *For emotional risk for participation*, she started in Wave 1 with scores above the all girls and girls with disabilities group means and inline with the configuration and sample group means, in Wave 2 above all group means, in Wave 3, she moved to below the all girls and girls with disabilities group means and inline with the configuration and sample group means, then in Wave 4, her score moved to below all groups with the exception of being inline with the sample group mean. Mo-A had positive perceptions of *protection from* and *encouragement for bullying* in school. For *peer protection from bullying*, in Wave 1 through Wave 3, she scored above all group averages, then in Wave 4 she scored inline with the configuration and above the other group means. For *peer encouragement of bullying*, in Wave 1, this student scored inline with the sample group but below all other group means, in Wave 2, she scored inline with the girls with disabilities group mean and below all other group means, and in Wave 3 and Wave 4, her score went back to being inline with the sample group mean and below the other group means. *Sociometric* data revealed Mo-A was considered neglected in Wave 1 then average in Wave 2 through Wave 4. Social networking data was only available for Wave 1, but showed Mo-A was in a secondary peer group as a peripheral member.

Mo-B. Mo-B was selected as an outlier because of increased *aggression* scores in Wave 3, and large downward trends in *prosocial* and *social prominence* scores. Although this movement indicated negative reorganization, it should be noted that all of Mo-B's scores were still inline with all mean group averages. For the *prosocial* factor, she scored well above all of

the group means in Wave 1, she scored above the sample mean but below the other group means in Wave 2, then she scored inline with the all girls group mean, above the girls with disabilities group mean, and below the configuration and sample group means in Wave 3. Finally, in Wave 4, Mo-B scored inline with the all girls and sample group means, above the disabilities group mean and below the configuration group mean. A downward trend also occurred for the *social prominence* variable. In Wave 1, Mo-A scored above all group means, in Wave 2 and Wave 3 she scored above all group means with the exception of being inline with the configuration group mean, and in Wave 4 she moved inline with the all girls group mean, above the disabilities and sample mean groups, and below the configuration group mean. For the *aggression* factor, her scores were inline with the sample group mean and below the other group means in Wave 1, in Wave 2 she scored a zero, then in Wave 3 her score increased to be inline with the configuration group mean and above the other group means. Finally, her score moved back to zero in Wave 4. For the *internalizing* factor, in Wave 1, Mo-A's scores were inline with the sample group mean and below the other group means, in Wave 2 she scored a zero, in Wave 3 she scored below all group means, and in Wave 4, her score moved back to zero. Mo-A displayed positive scores on the *picked on* item; she scored zero in all four waves.

Process variable scores indicated Mo-A had an overall positive perception of the school climate. She displayed scores in *school belonging* and *school involvement* inline with group means. For *school belonging*, her score was above all group means in Wave 1. However, in Wave 2, her score dropped below the sample group mean and inline with the other group means. Mo-A's score moved inline with all group means in Wave 3, and then she scored above the configuration group and remained inline with the other group means in Wave 4.With *school involvement*, Mo-B started with a score above the sample group and inline with the other group

means, and then dropped to below all group means in Wave 2. In Wave 3, her score moved inline with all group means, and in in Wave 4, her score fell below the girls with disabilities group mean and remained inline with the other group means. Mo-B also showed overall positive perceptions of *emotional support* and *emotional risk for participation*. For *emotional support*, in Wave 1, her score was inline with all group means, in Wave 2, her score fell below all group means with the exception of being inline with the sample mean, in Wave 3, her score moved inline with the disability group mean, above the all girls and configuration group means, and below the sample group mean, and in Wave 4, her score was above all group means with the exception of being inline with the girls with disabilities group mean. With *emotional risk of participation*, Mo-B scored below the girls with disabilities group mean and inline with the other groups in Wave 1 and below all group means in Wave 2. Her score then moved inline with the sample while remaining below the other group means in Wave 3, and in Wave 4, her score moved back to being below all group means. Mo-B's perception of *bullying* was variable but overall positive with scores in the average range. Specifically, for *peer protection for bullying*, she scored inline with the sample group mean and above the other group means in Wave 1 and Wave 2. In Wave 3, her score was inline with all group means with the exception of being below the configuration group mean, and in Wave 4 her score moved to be inline with the configuration group but below the other group means. For *peer encouragement for bullying*, in Wave 1, To-B scored inline with the sample group mean and below the other group means, in Wave 2, her score was below all group means. She then scored above the sample group, and inline with the other group means in Wave 3, and in Wave 4, she moved inline with the sample and below the other group means. Social process variables showed To-B's *sociometric status* was considered average in all four waves. Further, she showed relatively high social status by being a peripheral

member in a nuclear group in Wave 1 and moving up to a secondary member of a nuclear group in Wave 2.

Mo-C. Student Mo-C was selected as an outlier for uncharacteristically high scores in *aggression* and *internalizing* factors, and the *picked on* item along with uncharacteristically low scores on the *social prominence* factor. With the *aggression* factor, Mo-C received variable scores. In Wave 1, she scored above the sample group mean and below the other group means then dropped to zero in Wave 2 and Wave 3. However, in Wave 4, her score increased to be above all group means. With the *internalizing* factor, Mo-C started in Wave 1 with a score inline with the configuration group mean, above the sample group mean, and below the all girls and girls with disabilities group mean scores. Her score dropped to be inline with the sample mean, but below the other group means in Wave 2; however, in Wave 3, her score increased to be above all group means, and in Wave 4, her score moved inline with the disability group mean and remained above the other group means. Mo-C also demonstrated varying levels of *social prominence* and *picked on* scores that demonstrated a fluctuation of positive and negative reorganizations. For *social prominence*, her score was inline with the girls with disabilities group mean and below other group means, and in Wave 2, her score dropped to zero. Then her score increased to be above all group means in Wave 3, and in Wave 4, her score was inline with the configuration mean and above the other group means. For the *picked on* item, she fluctuated from a score above all group means in Wave 1 to zero in Wave 2. Her score increased in Wave 3 to be inline with the configuration group and above the other group means, but then her score returned to zero in Wave 4. Despite increasing *internalizing* and *aggression* scores, Mo-C showed progressively higher scores on the *prosocial* factor. In Wave 1, her score was inline with the sample group mean, above the girls with disabilities group mean, and below the all girls and

configuration group means, and in Wave 2, her score was inline with the girls with disabilities mean, above the sample group mean, and below the all girls and configuration group means. Then in Wave 3 and Wave 4, her scored jumped significantly to above all group averages.

Process variable scores showed Mo-C's had overall positive perceptions of the school climate. She displayed average to above average scores in *school belonging* and *school involvement*. For *school belonging*, Mo-C had a score above the girls with disabilities group means and inline with the other group means in Wave 1; in Wave 2, she remained inline with the configuration and sample mean groups but rose above the all girls and girls with disabilities group means. In Wave 3, her scores were inline with all of the group means, and in Wave 4, her scores moved to be inline with the disabilities and sample group means and above all girls and configuration group means. For *school involvement*, Mo-C's score was inline with the disabilities and sample group means and below the all girls and configuration group means in Wave 1; then in Wave 2, her score moved to above all group means, and in Wave 3 and Wave 4, her score dropped to be inline with all group means. Additionally, Mo-C had positive perceptions of the *emotional support* and *emotional risk* associated with participation in the school environment. For *emotional support*, this student gave a score above the all girls group mean and inline with the other group means in Wave 1. Data was not available for Wave 2. In Wave 3, her score was inline with the sample group mean and above the other group means, and in Wave 4, her score was inline with the students with disabilities group mean and above the other group means. Her scores were also predominately inline with the group means for *emotional risk for participation*. In Wave 1 and Wave 2, Mo-C's score was inline with the group means; in Wave 3, her score was inline with the configuration and sample group means, and below the all girls and disabilities group means; and in Wave 4, her score moved to above the girls with disabilities group mean but

below the other group means. Mo-C demonstrated more variable and negative perceptions of *bullying* in the school environment. For *peer protection from bullying*, she scored below the sample group mean and inline with the other group means in Wave 1 and Wave 2; then in Wave 3, her score shifted to be inline with the girls with disabilities group mean but below the other group means, and in Wave 4, her score fell below all the group means. For *peer encouragement from bullying*, her score was inline with the sample group mean, and above the other group means in Wave 1; in Wave 2 and Wave 3, her scores were inline with all of the group means, and in Wave 4, her score was inline with the sample but below the other group means. Social process variables show Mo-C had very high *sociometric statuses*. In Wave 1 she was considered popular; in Wave 2 she moved to average; and in Wave 3 and Wave 4 she moved back to a popular status. Social networking data indicated that Pa-C was a secondary member of a secondary group in Wave 1 and Wave 2.

Passive

Pa-E. The decision rule process identified the Passive configuration by below average scores in *aggression* and above average scores in *internalizing* with below average scores in *prosocial* and *social prominence* factors on the ICS-T. Pa-E was selected as an outlier because she exhibited extremely high scores on the *picked on* item. While these score are not necessarily uncharacteristic of the Passive configuration, Pa-E's scores were much higher than the other group means and stood out in the prodigal analysis. Specifically for this factor, in Wave 1, she received very high scores well above all group means, in Wave 2, her score dropped but was still above all group means; in Wave 3, her score continued to drop and placed her inline with the all girls and girls with disabilities group means and below the configuration and sample group means. However, her score jumped back up in Wave 4 and was much higher than the other group

means. For the *internalizing* factor, in Wave 1, Pa-E started with a score above the other group means with the exception of being below the sample group mean; her score then dropped but remained above the all girls group mean and below the other group means in Wave 2. In Wave 3, her score moved inline with the configuration group mean and above the other groups; then in Wave 4, her score moved to above all group means. Typical for this configuration, she scored very low on the *aggression* factor. In Wave 1 she scored zero; in Wave 2, she scored above the configuration but below the other group means; and in Wave 3 and Wave 4, this student's score moved back to zero. Pa-E also received very low scores on the *prosocial* and *social prominence* factors. For the *prosocial* factor, her score was below the all girls group mean and above the other group means in Wave 1; then her scores dropped to below all group means in Wave 2 and Wave 3; and in Wave 4, this student scored zero. Further, related to the *picked on* item, she scored zero in all four waves for the *social prominence* factor.

Individual level process variables showed Pa-E had inconsistent perceptions on the school climate. However, it is important to note she had missing data for these variables in Wave 4. Specifically, she had low levels of *school belonging*. In Wave 1, this student was above the sample group but below the other group means; in Wave 2, her scores were below all group means; and in Wave 3, her score was inline with the configuration but below the other mean group means. Pa-E had better scores in *school involvement*. In Wave 1, her score was inline with all group means; in Wave 2, her score moved to above all group means, and in Wave 3, her score was slightly higher than the all girls group mean and inline with the other group means. Pa-E also had variable perceptions of the *emotional support* and *emotional risk for participation* in the school environment. For *emotional support*, her score was below all group means in Wave 1, but in Wave 2, her score moved to above all group means. Pa-E's score then fell inline with the

sample but below the other group means in Wave 3. For *emotional risk of participation*, in Wave 1, her score was below all group means; in Wave 2, it moved to be inline with all group means, and in Wave 3, her score fell back to below all group means. Pa-E started with more positive perceptions of the *bullying* context in the school environment, but her scores reflected more negative perceptions as she progressed through middle school. For *peer protection from bullying*, in Wave 1 and Wave 2, her scores were above all group means; however, in Wave 3, her score dropped to below all group means. Contrariwise, for *peer encouragement from bullying*, in Wave 1 and Wave 2, her scores were below all group means, then in Wave 3, her score rose to be inline with all group means. Social process variables showed Pa-E had variable *sociometric statuses*. In Wave 1 she was considered neglected; in Wave 2, she moved to average; in Wave 3, she fell to rejected, and in Wave 4 she moved back to neglected. Social network data was less variable and revealed she was a peripheral member in a peripheral group in Wave 1 and Wave 2.

Pa-F. Pa-F was selected as an outlier for large variations in scores across the four waves. Specifically, she was selected because she experienced large drops and an overall downward trend in her scores for *internalizing*, *prosocial*, and *picked on*. Pa-F showed low levels of *aggression*. In Wave 1, she scored zero; in Wave 2, her score increased to be above the sample mean and below the other group means; then in Wave 3 and Wave 4, her score dropped back to zero. Her *internalizing* scores were very high but experienced drops as she progressed through middle school. Specifically, in Wave 1 and Wave 2, her score was above all group averages; in Wave 3, her score dropped to be below all group means; and in Wave 4, her score increased but still remained below the group means with the exception of being inline with the all girls group mean. Despite starting strong with high *prosocial* scores in Wave 1, Pa-F experienced overall very low scores in the *prosocial* and *social prominence* factors. For the *prosocial* factor, her

score was above all group means in Wave 1; however, in Wave 2, her score dropped to below all group means and remained in this below average position in Wave 3 and Wave 4. For the *social prominence* factor, her score was zero in Wave 1 through Wave 3; and in Wave 4 her score increased but remained below all group averages. Pa-F experienced a large drop in scores on the *picked on* item. In Wave 1, her scores were above the group means with the exception of being below the sample group mean. Then, in Wave 2, her score increased to be above all group means. However, her score dropped to zero in Wave 3 and Wave 4.

Process variables showed Pa-F had varying perceptions of the school climate. However, data for these variables were only available in Wave 1 and Wave 2. Available data showed Pa-F had low levels of *school belonging* in Wave 1 and Wave 2 with scores below all group means. *School involvement* scores put her above the sample group and inline with the other group means in Wave 1; then her scored moved to below the all girls and configuration group means and inline with the disability and sample means in Wave 2. Pa-F's perceptions of *emotional support for participation* were low. In both Wave 1 and Wave 2, her scores were below all group means. Her perceptions of the *emotional risk for participation* varied from positive to negative. In Wave 1, her score was slightly below all group means, but in Wave 2, her score increased to be above all group means. Pa-F showed varying perceptions of *bullying* in the school environment. For *peer protection from bullying*, her scores were below all group means in both Wave 1 and Wave 2. Her scores for *peer encouragement for bullying* were also below all group means in both Wave 1 and Wave 2. Social process variables showed Pa-F's *sociometric status* in Wave 1 through Wave 3 remained stable at average but then moved to rejected in Wave 4. Social networking data revealed in Wave 2 she was a peripheral member of a peripheral group (Wave 1 data was missing for this variable).

Pa-G. Pa-G was selected as an outlier for inconsistent *internalizing* scores. Further, this student experienced progress on the *prosocial* factor and a large drop in scores for the *picked on* item. However, consistent with configuration characteristics, Pa-E scored very low on the *aggression* factor; she scored zero in all four waves. Her scores were variable for the *internalizing* factors. In Wave 1, her score was below the sample mean and above the other group means; in Wave 2, her scores dropped to below all group averages; in Wave 3, her score increased to be inline with the configuration and above the other group means; and in Wave 4, her score increased back to above all group means. Pa-G showed large gains on the *prosocial* factor. She scored a 0 in Wave 1, then her score increased to be inline with the disability group and below the other groups in Wave 2. Her score continued to increase in Wave 3 to be above all group means, but fell in Wave 4 to be inline with the sample and girls with disabilities group means and below the all girls and configuration group means. Additionally, her scores showed variable progress on the *social prominence* factor. In Wave 1, her score was low but above the sample mean while being below all group means; in Wave 2, her score dropped to 0. Pa-G showed progress in Wave 3 with a score above the sample, configuration, and disability group means but still below the all girls group mean score. In Wave 4, her score decreased to be below all group means with the exception of being above the sample group mean. Pa-G made large gains on the *picked on* item. In Wave 1, she had a very high score that was below the sample mean but above the other group means; then in Wave 2, her score dropped to zero and remained there in Wave 3 and Wave 4.

Process variables showed the student had varying perceptions of the school climate. Overall, Pa-G had positive perceptions of *school belonging* and high levels of *school involvement*. For *school belonging*, her score was above the sample mean and inline with the

other group means in Wave 1; her score increased to above all group means in Wave 2 and inline with group means in Wave 3. Her scores increased in Wave 4 to above the group means, with the exception of being inline with the sample group mean. She reported high levels of *school involvement* with scores above all group means across the four measurement waves.

Despite positive perceptions of *emotional support*, Pa-G had negative perceptions of the *emotional risk for participation* in the school environment. For *emotional support*, this student had scores above all group means in Wave 1 through Wave 3. Her score was also above all group means in Wave 4, but the sample mean could not be used in this wave due to missing data. For *emotional risk of participation*, Pa-G started with a score above all group means in Wave 1; in Wave 2, her score was above the all girls group mean and inline with the other group means; and in Wave 3 and Wave 4, her scores increased back to above all group means. Pa-G had negative views of *bullying* in the school environment. For *peer protection from bullying*, in Wave 1, her score was below all group means; in Wave 2, her score moved inline with the all girls and configuration group means, and above the sample and disability group means; but in Wave 3 and Wave 4, her scores dropped back to below all group means. Inversely, for *peer encouragement of bullying*, her scores were above all group means in Wave 1 through Wave 3, and then her score fell to be inline with all group means in Wave 4. Social process variables showed how Pa-G's *sociometric status* fluctuated as she progressed through middle school. In Wave 1 and Wave 2, she was considered neglected, in Wave 3, she moved to average, and in Wave 4, she was considered controversial. Social networking data was not available for this student.

Tough

To-E. High *aggression* and *low internalizing* scores on the ICS-T define the Tough configuration. Student To-E was selected as an outlier because she displayed uncharacteristically low peer nominated scores on the *aggression* factor and higher scores on the *internalizing* factor. Further, her score on the *picked on* item increased sharply in Wave 4. For the *aggression* factor, To-E scored zero in Wave 1 through Wave 3. Her score for this factor increased in Wave 4, but she was still below all group means. Conversely from *aggression*, To-E's score in *internalizing* was above all group means in all four waves. She also displayed above average scores on the *prosocial* factor. In Wave 1 and Wave 2, her scores were above all group means; in Wave 3, her score dropped but was inline with the all girls group mean and above the other group means; and in Wave 4, her score moved back to above all group means. Although To-E displayed high scores on the *prosocial* factor, she struggled with *social prominence*. In Wave 1 and Wave 2, she scored 0; in Wave 3, her score increased to be inline with the girls with disabilities group mean and below the other means, and in Wave 4, her score dropped again to be below all group means. To-E also struggled with the *picked on* item with high scores above all group means in all four waves. Further, this student experienced a large increase in her score on this item in Wave 4.

Individual level process variables showed progressively negative perceptions of the school climate. For *school belonging*, To-E's scores were above all group means in Wave 1 through Wave 3, but her score dropped to be inline with the configuration group mean and below the other group means in Wave 4. Her *school involvement* score started inline with all group means in Wave 1; her score moved to above all group means in Wave 2, and in Wave 3 and Wave 4, her scores dropped to be inline with group means. To-E experienced more distinctive downward trends in *emotional support* and *risk for participation* in the school environment. For

emotional support, in Wave 1 and Wave 2, her score was above all group means; in Wave 3, her score dropped to be inline with the configuration group mean and below the other group means, and in Wave 4, her score fell below all group means. For *emotional risk of participation*, her score was below the disabilities group mean and inline with the other group means in Wave 1; in Wave 2, her score was above the all girls group mean and inline with the other group means; in Wave 3, her score was above the configuration group mean and inline with the other groups, and in Wave 4, her score increased to above all group means. Continuing with the negative trend, To-E's perceptions of *bullying* progressively declined. For *peer protection from bullying*, in Waves 1 and 2, her scores were above the other group means; in Wave 3, her score dropped to below all group means, and in Wave 4, her score moved inline with the configuration group mean but remained below the other group means. For *peer encouragement of bullying,* her scores were below all group means in Wave 1 and Wave 2, and her score moved to above all group means in Wave 3 and Wave 4. Social process variables showed To-E's social status varied across waves. For *sociometric status*, in Wave 1, she was considered neglected; in Wave 2 and Wave 3, she was considered average, and in Wave 4, she was considered rejected. SCM data showed she was a peripheral member of a peripheral group in Wave 1 and Wave 2.

Troubled

Tr-E. While exhibiting characteristics inline with the *Troubled* configuration, Tr- E was selected as an outlier because of her extremely high scores on *aggression* in Wave 1 and subsequent decreases in this factor across the remaining three waves. Further, she started with very high *social prominence* scores and decreased to very low scores by Wave 4. Due to missing data from another student in the sample, Tr-E's score will represent the sample mean for the Peer Behavioral Assessment. For *aggression*, in Wave 1 and Wave 2, she scored very high scores well

above all group means, and in Wave 3 and Wave 4, she experienced a big drop in scores to below all group means. For the *internalizing* factor, her score was above the all girls and configuration group means and inline with the disabilities group mean in Wave 1; her score increased to well above all group means in Wave 2, and her score continued to be above all group means in Wave 3 and Wave 4. Tr-E's scores for the *prosocial* factor started very high in Wave 1 and decreased to low levels by the end of Wave 4. Specifically, in Wave 1, she scored higher than the disability and configuration group means but below the all girls group mean; in Wave 2, her score was slightly above the configuration group mean but below the all girls and disabilities group means; in Wave 3, her score decreased but was above the configuration and disability group means and below the all girls group mean, and in Wave 4, her scores dropped to below all group means. Tr-E's *social prominence* scores also started high and dropped in subsequent waves. In Wave 1, her score was above all group means; in Wave 2, her score decreased but was inline with all group means; in Wave 3, her score dropped below the all girls group mean but was above the disabilities and configuration mean groups; and in Wave 4, her score was below the all girls and configuration group means and above the disabilities group mean. Continuing with the negative trend, on the *picked on item*, Tr-E scored zero in Wave 1 through Wave 3; and in Wave 4, her score experienced a large increase putting her well above all the group means.

Process variables show Tr-E had variable but overall negative perceptions of the school climate. For *school belonging*, in Wave 1 her score was below all group means; and in Wave 2 through Wave 4, her score moved inline with the sample mean, but was below all other group means. For *school involvement*, in Wave 1, her score was above all group means; in Wave 2, her score remained above the sample group mean but inline with the other group means; in Wave 3,

her score was inline with the sample and below the other group means, and in Wave 4, her score was inline with all group means. Tr-E had a negative view of the *emotional support* and *emotional risk for participation* in the school environment that improved by Wave 4. For *emotional support*, in Wave 1 and Wave 2, her score was inline with the sample, but below all other group means; in Wave 3, her score was inline with the sample and configuration group means and below the all girls and disabilities group means; and in Wave 4, her score was below the disabilities group mean and inline with the other group means. For *emotional risk of participation*, in Wave 1, her score was inline with the sample and above the other group means; in Wave 2, her score moved above all mean groups; in Wave 3, her score returned to being inline with the sample mean and above the other group means; and in Wave 4, her score was inline with all group means. Tr-E demonstrated varied perceptions of *bullying* in the school environment. For *peer protection from bullying*, in Wave 1, her score was above all group means; in Wave 2, her score was inline with all group means; in Wave 3, her score dropped to below all group means, and in Wave 4, her score increased considerably to be above all group means. For *peer encouragement for bullying*, in Wave 1, her score was inline with the group means; in Wave 2, her score moved below all group means; in Wave 3, her score jumped to above all group means; and in Wave 4, her score continued to increase considerably to be well above all group means. Social process variables also showed variability with Tr-E's *sociometric status*. In Wave 1 she was considered neglected, in Wave 2, she was considered average; in Wave 3, she moved up to popular, and in Wave 4, she moved back to a neglected status. Social networking data showed she was a peripheral member of a secondary group in both Wave 1 and Wave 2.

Summary

In general, girls' scores from the Peer Behavioral Assessments aligned with the configurations created with the ICS-T. However, the outliers showed scores that call into question their placement in a specific configuration. Thus, configurations are an important starting point for better understanding student development and trajectories, but specific SWD's distinct needs must be considered when individualizing classroom practices and interventions.

Chapter 5

Discussion

Special education is defined by student individualization; thus, interventions and services must be tailored to the diverse needs and varied levels of support SWD require. Student needs along with the individualization process becomes more complex as students age, especially as they transition through middle school (Farmer et al., 2013). The present study took the first steps to provide schools with a blueprint for collecting data informed by developmental science to identify students' unique characteristics and trajectories through middle school that can inform and enhance school-based interventions. The three research aims in this study sought to:

1. Create a set of decision rules that practitioners can use to place SWD in distinct configurations based on the teacher completed ICS-T. The specific research question for this aim was: Is there large variability between the LPA model and decision rules configurations?
2. Measure the predictive relationship of SWD's ICP configurations in the fall of 6th grade and various longitudinal academic (i.e., school reported end of year grades), behavioral (i.e., school reported attendance and suspensions), and emotional outcomes (i.e., student reported anxiety and emotional struggles) in the spring of 6th grade then again in the spring of 7th grade. The specific research questions for this aim included:
    a. Do SWD's academic, behavioral, and emotional outcomes vary based on their placement within a specific ICP configuration?
    b. Do these outcomes vary overtime?
3. Investigate SWD in teacher placed at-risk configurations' adjustment from the fall of the 6th grade to the spring of the 7th grade measured by peer nominated behavior indicators, then

analyze school climate and social process variables in relationship to the change or stability of student adjustment over time to establish potential patterns that can inform the individualized data-based decision making process. Specific research questions for this aim included:

a. How do students with disabilities in various ICP configurations' adjust through middle school compared to their same age and gender peers on peer behavior assessments?
b. Are their specific process variables related to SWD adjustment?
c. Can clear patterns of development be identified using ICP configurations, Peer Behavioral Assessments and selected school climate and social process variables?

Due to the exploratory nature of this study, specific hypotheses were not disclosed. Various person-centered approaches were used to explore the study's specific aims. Results, while variable, supported DST and highlighted the multifaceted nature of SWD's development in the middle school environment.

Decision Rule Process

I created the decision rule process from the extant ICP literature. Previous studies established five distinct configurations: *Model*, *Passive*, *Tough*, *Troubled,* and *Neutral* (Chen et al., 2019). Initial CFAs confirm there were no significant differences between the students placed in specific configurations based on LPA and students placed in specific configurations based on the the decision rule process. This finding included both the larger sample and specifically SWD in the sample. Thus, the CFA provides the first piece of evidence supporting the utility of the decision rule process. This practitioner oriented decision tree provides schools with a tool they can use to better understand students' development and functioning without the use of statistical

models. This is important, because schools often do not have large enough populations or resources to produce significant statistical findings that can support this type of nuanced data-based decision-making and individualization process for their SWD. Additionally, the decision rule process provides a blue print for data-collection that is guided by group averages unique to individual schools' contexts and student population as opposed to national or regional norms. Further research is needed to confirm the validity and reliability of the decision rule process, including more strenuous IOA analysis and additional CFA data. Moreover, evidence of social validity must be collected with trained practitioners, interventionists, and other school personnel.

Student with Disabilities' Outcomes

For the second aim, I sought to distinguish SWD in specific configurations' academic, behavioral, and emotional outcomes across two time points: the spring of 6th grade and the spring of 7th grade. This longitudinal analysis intended to extend the current research base on ICP configurations to explore how disability impacted student outcomes within specific configurations across the first two years of middle school. Results showed variable predictive relationships between SWD within a specific configuration and various academic, behavioral, and emotional outcomes.

Academic Outcomes

Reading

As a whole, students with a disability (excluding configuration membership) were significantly related to lower Reading grades in both Wave 2 and Wave 4. The Tough configuration was also significantly related to lower Reading grades in Wave 2. Thus, it was less of a surprise by Wave 4 SWD in the Tough configuration had significantly lower Reading grades. However, this finding is inconsistent with the literature and this configuration's

characteristics (Chen et al., 2019; Farmer et al., 1999). Tough students are characterized by average to above average academic scores on the ICS-T. This academic inconsistency suggests the addition of a disability can have negative effects on the Tough student's academic performance, but potentially not their popularity and social standing.

Math

The Tough configuration was also related to lower math grades in Wave 4. Interestingly, there was a significant relationship between SWD in the Model configuration and Math grades in Wave 4. Model SWD were connected to higher Math scores in Wave 4. This finding demonstrated disability, while common, does not necessarily predict poorer academic outcomes for configurations not considered at-risk.

Behavioral Outcomes

Days Absent

Two configurations were significantly related to days absent. The Passive and Tough configurations were both associated with increased school absences in Wave 2. However, no significant interaction effects between disability and a configuration were found for this variable. The lack of significant interactive relationships related to this factor was not surprising. The characteristics associated with Tough (i.e. high aggression and potential trouble with authority) and Passive (i.e. high internalizing scores that can produce physical symptoms that lead to absences) are more predictive of variations in absences compared to students with disabilities.

Days Suspended

The Tough configuration was related to increased suspensions in Wave 2, and the Troubled configuration was related to increased suspensions in Wave 4. SWD in the Tough configuration were significantly predictive of higher rates of suspension. Because high levels of

aggression characterize both configurations, these findings highlight the potential impact of aggression on school suspensions. Further, SWD in the Tough configuration were negatively impacted with this variable compared to SWD in the Neutral configuration. The emphasis of *aggression* on the Tough configuration coupled with potentially more learning difficulties and a need to maintain their social status could help explain this negative relationship (Farmer et al., 1999).

Emotional Outcomes

SDQ Score

SWD as a whole were significantly related to increased scores on the SDQ in Wave 2. SWD in two configurations were significantly related to increased scores on this measure in Wave 2: Passive and Troubled. These groups of students were associated with higher scores, which indicates increased emotional problems. Again, based on configuration characteristics of high levels of internalizing behaviors and low popularity, it was not surprising the addition of a disability, which often negatively impacts students academically and socially (Chen et al., 2015; Farmer et al., 2019), exacerbates SDQ emotional scores for SWD in the Passive and Troubled configurations. No significant interactions with this measure occurred in Wave 4.

SCARED Score

Not surprisingly, the Passive configuration was significantly related to increased SCARED scores in Wave 4. Only SWD in the Tough configuration had a significant relationship with increased SCARED scores in Wave 4. This interaction effect contradicts one of the defining characteristics of the Tough configuration: low internalizing scores. However, this relationship is important because it suggests as Tough SWD progress through middle school, they experience increased levels of social anxiety. The anxiety could be related to increased social difficulties

experienced by SWD (Chen et al., 2015; Farmer et al., 2019) and this configurations' need to maintain their social standing. Additionally, while not a part of this specific aim, gender impacted emotional scores. This is not unexpected, because anxiety and other more internalizing behaviors are more commonly associated with girls (Kaeses et al., 2011; Young et al., 2011). Yet, this finding should be considered when individualizing interventions for SWD.

Summary

Although not every relationship and interaction was considered significant, taken collectively, the results of the multiple linear regressions highlight the interconnected nature of development and how the interplay of disability and configuration placement could potentially affect longitudinal outcomes. Most notably, SWD disabilities in the Tough configuration had the highest number or significant relationships compared to any other configuration. Results indicated the interaction between the Tough configuration and having a disability negatively impacted academic, behavioral, and emotional outcomes throughout the first two years of middle school. Following Tough, SWD in the Passive and Troubled configuration also displayed significant associations with poorer behavioral and emotional outcomes. Conversely, Model SWD had a positive relationship with academics. Therefore, it appears the addition of a disability to an at-risk configuration could negatively impact outcomes as students progress through middle school, but not necessarily in more adaptive configurations.

This research aim along with its findings provides further evidence for the concept of correlated constraints. Students are a product of their interactions within multiple domains of functioning. Tough SWD illustrated this point by highlighting the interplay of academics and behavior and its impact on one-another and the students' social standing. Aggressive students are more likely to be taken out of the classroom, which negatively impacts their academic grades. A

SWD that may already struggle in academics could feel this impact especially hard. Also, struggles in academics can lead the student to act out, which leads to an increase in suspensions or time away from the classroom. Together, this dynamic can negatively impact the student's social standing, which can lead to increased levels of social anxiety.

Prodigal Analysis

The results of the second research aim synthesized above provide an important argument for the interconnected nature of student functioning and its impact on various outcomes. However, in accordance with the concepts of equifinality and multifinality, more research was needed on individual student pathways and potential mechanisms that are related to these developmental patterns and trajectories throughout middle school. The third research aim began to explore student functioning and developmental patterns along with their association with various school climate and social process variables. I completed this aim by first using the decision rule process to place students in specific configurations. Those students within the Model and at-risk configurations (i.e. Passive, Tough, and Troubled) with a labeled disability were selected for the prodigal analysis. Then peer nominated behaviors (i.e., aggression, internalizing, prosocial, social prominence, and picked-on) were graphed for each selected student and used as indicator variables to establish trends among configurations and SWD within them compared to their same age and gender peers. Those students with extreme scores, large shifts in scores, or scores that did not fit with their configuration trend were selected as outliers. Finally, outliers' school climate and social process variables were analyzed and compared to their same age and gender peers. Summaries of the trends and outlier results are discussed followed by the outliers' association with various school climate and social process variables.

Boys Configuration Trends

In general, SWD as a whole received the lowest scores on positive indicators and the highest scores on indicators of maladaptation compared to the overall boys population and various configuration groups. The Model configuration displayed scores consistent with positive developmental patterns, and at-risk configurations varied in their results and placement among group averages. As noted above, no boys with a disability were placed in the Model configuration. Therefore, analysis for boys in this configuration could not take place.

Overall, trends confirmed developmental patterns consistent with configuration characteristics, with the exception of the Passive configuration. Peer behavior assessments indicated SWD in the Passive configuration received the lowest average scores in *internalizing* and *picked on* across the four measurement waves. However, this group struggled with low *prosocial* and *social prominence* scores compared to the other group means. These results were contradictory to the high levels of internalizing behaviors and low social status that defines this configuration. A possible explanation for this contradiction is the measurement-reporting source. Passive students are not aggressive and typically do not stand out in the social network (Farmer et al., 2008, Chen et al., 2019), therefore their peers may not recognize their internalizing behaviors. Also this "under the radar" persona held by many Passive students decreases *prosocialness* and *social prominence* but also makes them less of a target for being picked on by their peers.

Tough SWD received the highest scores for *aggression* compared to other group means. I believe this finding supported Tough SWD significant relationship with increased behavior problems discussed above in the second research aim. Tough SWD also scored higher than the Tough configuration average for internalizing across the four waves, which could be connected

to their significant relationship with higher SCARED scores in Research Aim 2. Tough SWD also received the highest scores for *social prominence* and low scores on the *picked on* item. However, Tough SWD scored very low on the *prosocial* factor, and was one of the few configurations with controversial students. These scores suggest Tough SWD are popular but not necessarily viewed as favorable or friendly (Farmer et al., 2003).

Troubled SWD's scores were most consistent with their configuration characteristics and further demonstrated the potential negative impact of disability on this configuration. These students scored the highest in *aggression*, *internalizing*, and *picked on* while receiving the lowest scores for *prosocial* and *social prominence* compared to other group means, including the Troubled configuration as a whole. These findings support previous research demonstrating SWD are often considered victims of social rejection, bullying, or become bully-victims (use bullying tactics to increase their social prominence and decrease bullying behaviors directed towards them). SWD with lower social prominence (i.e., Passive and Troubled) are typically victims of bullying while SWD with higher social prominence (i.e. the Tough SWD in this study) usually are bully-victims (Farmer et al., 2003; Chen et al., 2015).

Girls Configuration Trends

Although female SWD were distributed across the four configurations analyzed for the prodigal analysis, the sample group findings for Tough and Troubled SWD should be viewed with caution because the sample only contained one student. Like the boy trends, peer indicator variables both confirmed and contradicted many configuration characteristics and expected pathways. Model SWD confirmed expected patterns by receiving the lowest scores across comparison groups in *aggression* and *internalizing* factors. However, this group scored the lowest on *prosocial* and *social prominence*. Further, Model SWD started with the highest scores

on *picked on*, but this score showed a downward trend across the four measurement waves.

Passive SWD trends were more inline with configuration characteristics. These students scored the highest on *internalizing* and the lowest on *aggression* in relation to comparison groups. Yet, Passive SWD followed the same trends as Model SWD with the *prosocial*, *social prominence*, and *picked on* factors. This group received the lowest scores in *prosocial* and *social prominence* scores while receiving high *picked on* scores, which showed a downward trend with each measurement wave. The Model and Passive SWD trends emphasize the negative impact disability can have on a student's social domain (Chen et al., 2015; Farmer et al., 2019). This is because the Model configuration is defined by above average popularity, yet female SWD in this configuration had a much lower social standing and favorability with their peers. Also, although high levels of popularity do not characterize the Passive configuration, SWD also scored lower on social indicator variables than the Passive configuration as a whole. Based on the differences among boys and girls, it appears struggles in the social domain were more prominent with girl SWD compared to boy SWD.

While Model and Passive SWD followed trends in *aggression* and *internalizing* consistent with their respective configurations, Tough and Troubled students received scores contradictory to their configuration. Specifically, the Tough SWD had the lowest scores in *aggression* and the highest scores in *internalizing.* She also showed difficulties in the social domain. While receiving the highest *prosocial* scores, this Tough SWD had the lowest score on *social prominence* and the highest score on the *picked on* item. This supports the notion that configurations placement could impact genders differently. Specifically for the Tough configuration, girls with disabilities are perceived more favorably but do not have as high of a social standing as Tough boys with disabilities. Interestingly, the female Troubled SWD had the

lowest scores on *aggression* and received very high scores on the *prosocial* factor, which would not be expected for this configuration. Yet, the Troubled sample student was inline with expectations for the *internalizing*, *social prominence*, and *picked on* factors. She received the highest scores in *internalizing* and *picked on* while having the lowest *social prominence* scores among comparison groups. Again these findings highlight the idea that girls in at-risk configurations are perceived more favorably yet struggle in the social domain.

Outlier Analysis and Associations with Process Variables

The ICP configurations provided a solid foundation for comparison and individualization while the results of the multiple regressions provided insights into the outcomes of SWD within those configurations; moreover, the results of the prodigal analysis demonstrated the importance of going beyond group averages and analyzing individual developmental pathways within configurations. The relatively large number of outliers and their diverse scores in the prodigal analysis demonstrated that, although students may share similar characteristics within a configuration, the degree to which those characteristics manifest, interact, and affect one another varies greatly by student. Confirming exact trends, interactions with process variables, and pathways of development go beyond the scope of this exploratory study. However, general variations and associations emerged that can inform the intervention individualization process.

Boy Outliers

A majority of the boys selected as outliers received peer nominated behavior scores confirming the teacher-rated interpersonal characteristics that placed them in a specific configuration. For example, most of the Tough outliers had high scores on *aggression* across the four measurement waves, and Troubled outliers also received high *aggression* scores in addition to low *prosocial* and *social prominence* scores. What distinguished them from other SWD in the

configuration were their extreme scores on various indicating variables. Further, overwhelmingly, outlier boys received scores across the measurement waves consistent with negative reorganization and pathways.

In terms of specific variables, *aggression* was associated with *social prominence* and/or students with higher social statuses and a reversed trend when *aggression* levels dropped. Inline with this connection, students with high scores in *aggression* tended to have higher *social prominence* scores than students in the same configuration with lower *aggression* scores. These connections were most notably seen with the Tough configuration. Specifically, To-B and To-C's *aggression* and *social prominence* scores followed the same negative trajectory: as their *aggression* score lowered so did their *social prominence* scores. Students in the Passive configuration displaying low aggression and corresponding *social prominence* scores also supported this pattern. However, *social prominence* did not appear to be connected to *prosocial* behaviors. Consequently, as discussed above with the second research aim, just because a SWD had higher *social prominence* does not necessarily mean they are *prosocial* or well liked; they could potentially be using their aggressive behavior to gain higher prominence and a more nuclear role in the social network (Chen et al., 2015; Farmer et al., 2019).

Not every boy outlier's peer nominated scores aligned with their ICP configuration characteristics. In these instances (one boy in the Passive configuration had very low *internalizing* scores and one boy in the Tough configuration had very low *aggression* scores), process variable data did not provide clear patterns to help explain these students' divergence from configuration group characteristics.

From the process variable analysis, a clear connection between *social prominence* scores and perceptions of *school belonging* emerged. The majority of the outlier students with higher

social prominence scores had higher levels of *school belonging*. *School belonging* and perceptions of *emotional support for participation* also appeared to be connected. A student's score placement (score compared to other gender and disability mean groups) in *emotional support* corresponded with their score placement with *school belonging*. Further, but not as consistent across outliers, was the connection between *emotional support for participation* and *peer protection from bullying*. Like the variables above, *emotional support* and *peer protection* displayed corresponding score placements. These connections are supportive of the *school belonging* literature, which contends *school belonging* is tied to students' perceptions of being liked and valued by peers and supported by teachers (Hamm & Faircloth, 2005; Roeser, Midgley, & Urdan, 1996). However, other school climate and social process variables did not display a clear connection to peer indicators of student adjustment. Students' ratings on these measures were variable, but still provided a clearer picture of their social needs in the school environment.

Girl Outliers

Differentiating from the boys' analysis, numerous SWD were placed in the Model configuration from the decision rule process. This allowed me the opportunity to analyze peer nominated behavior and social processes related to students associated with positive outcomes. Remarkably, most SWD in this group had similar *social prominence* scores to their other peers in at-risk configurations. Like the boys, outlier female Model SWD with increasing *aggression* scores had higher *social prominence* scores than their less aggressive peers with disabilities in this configuration. This provides yet another piece of evidence supporting the potential link between disability, *aggression*, and *social prominence*. Interestingly, Model SWD had higher scores on the *prosocial* factor and tended to have higher or improved sociometric statuses (i.e.

average and/or popular) and centrality in the social network (i.e. being a member of nuclear or secondary groups), which shows female SWD could be viewed more favorably by their peers, despite low rates of *social prominence*.

The female outliers as a group showed similar connections to *school belonging*, *emotional support for participation*, and *peer protection from bullying* like male SWD. However, the outlier female SWD were considered more *prosocial* than their male counterparts. Girls also had more of a connection with being *prosocial* and higher *social prominence* scores and less of an association between *aggression* and *social prominence* compared to the boys. This suggests female SWD may use different characteristics (i.e., *prosocial* vs. *aggression*) to gain social favor and improve their social standing. *School belonging* also appeared to be an important factor related to *social prominence*; however, this connection was not as prominent as it was with boys. Thus girls may use more of a combination of social, behavioral, and academic variables to comprise their feelings of *school belonging*. As with the boys, there were no clear patterns of process variables related to other specific indicators for girl outliers.

Summary

Despite the potential associations discussed above, specific patterns could not be confirmed from this exploratory study. The lack of definitive patterns should not be viewed as a weakness of the study, but instead confirmation of the principles of DST, specifically the concepts of equifinality and multifinality. While SWD may share similar characteristics that put them in similar configurations, their individual development and functioning is unique and driven by different variables and the interaction of those variables in various contexts.

Limitations

Design

Several limitations need to be noted for this study. The current study was a secondary data analysis of a sample from a larger efficacy trial; therefore, I could not control the data collection process and the database was not created to address this study's specific research aims. Particularly, student's specific disability label was not specified for this study, and students' sociometric status and social networking data for the process variable analysis could not be accessed for Wave 3 and Wave 4. Additionally, student outcome variables were only collected through the end of 7th grade and not the end of middle school. Future studies would benefit from the collection of specific disability, ICP, peer behavior, and process variable data from the start of 6th grade through the end of 8th grade.

Sample and Analytic Approaches

As discussed in the *Results* section, the sample had many missing values for key process variables. This was particularly true for the student process variables after Wave 2. While missing data can typically be accounted for through statistical methods, this study relied on raw data in connection to individual students, and could not employ these techniques. As a result, any missing data was a lost puzzle piece that could not be considered in the analysis. The sample was also relatively small. Only 480 students between the two schools could be used for the data analysis. Of this, only 78 were labeled with a disability. The small *n* hurt this study's ability to conduct more sophisticated and sensitive statistical analyses that addressed the nested nature of the data for the second research aim. Also, due the context specific data and its implications, findings from this study are not generalizable. Despite generalizability, the contextual nature of the data-collection process strengthens the practical implications for this framework. Finally,

because of the exploratory nature of Research Aim 3, only raw scores and group averages were used for the prodigal analysis. Once indicator variables were graphed, the study would have benefited from more sophisticated statistical methods. Linear regression and HLM could be used to calculate the growth curves of the five configurations and four comparison groups, so developmental pathways can be better quantified (Cadwallader et al., 2003).

Implications and Future Directions

This study pushed the boundaries of special education research by taking the initial steps to provide a framework for data-collection and analysis driven by DST. Data-based individualism from this perspective could provide a better understanding of the heterogeneity and development of SWD as they age. With this data, schools can more effectively intervene for SWD. Although important, this type of data collection can be difficult for schools to produce. Often, schools do not have the statistical power or resources to conduct this in-depth and complex data collection. To remedy this disconnect between research and practice, I first translated the ICP literature into a data collection process schools can use to better understand student developmental patterns. Then I added to the literature base on these configurations' potential relationships with academic, behavioral, and emotional outcomes, and the effect having a disability within the configurations has on these outcomes. Finally, I clarified unique developmental patterns for SWD and their association with various process variables.

Findings from this study highlight the impact social variables can have on student functioning. The outlier analysis demonstrated how the connection between *social prominence*, *aggression*, and *school belonging* played a role in student development and school functioning. *Social prominence* and *school belonging* appeared to have strong associations, and *school belonging* is related to a student's connection with peers (Hamm & Faircloth, 2005; Roeser,

Midgley, & Urdan, 1996). However, there was also a positive relationship with *aggression* and *social prominence*, especially with boys, suggesting *aggression* is a valued characteristic of SWD in the school environment. These findings are imperative to schools and teachers to consider as they seek to create practices, rules, and expectations that define their school and classroom climate.

Further, these results provide evidence for the importance of incorporating multiple types of data into the data-based decision process to individualize interventions. Configurations were created based on teacher-reported interpersonal competencies. The indicator variables for the prodigal analysis were peer-nominated; thus, providing data on how peers perceive individual student behaviors. The process variables used for this study relied on self-reported measures to better understand outlier students' feelings towards social aspects of the school climate. Taken together, this study provided a triangulated approach to data collection schools could use to gain a better understanding of the role of the social domain and how transactions within it affect student functioning. The triangulation approach becomes more important as students age, because their school environments become more complex, and the data collection and progress monitoring processes should reflect that. Starting in middle school, students are in numerous classrooms with different teachers throughout the day. This means teacher perceptions of student characteristics can vary, and student characteristics and adjustment can vary based on the social composition of the classroom. Thus, different teachers can have different perceptions of student ICPs, and peer and self-reports can either confirm or deny these configurations. Differences in placement and perceptions should not be viewed as a weakness to the framework. Instead, it can provide more insight into potential opportunities for change and adjustment. By asking why does Teacher A consider this student Tough and Teacher B considers this student Model, and what

academic, behavioral, social, and emotional factors are related to these perceptions, interventionists can gain a more nuanced insight into these characteristics, student adjustment, and how to best intervene in different contexts.

Currently, researchers and policy makers are focusing on Multi-Tiered Systems of Support (MTSS) to identify and meet the needs of all types of learners, including SWD. This system emphasizes data-based decision making and individualization. However, many of the measures used in this system do not include a focus on developmental processes and the target student's social domain (Farmer et al., 2020). The results of this study addressed this issue by providing schools with a data-collection framework that can be used to establish Tier 1 programs, support adaptation of Tier 2 supports, tailor individualized interventions at Tier 3, and enhance progress monitoring throughout the system. At Tier 1, the use of teacher reported ICS-Ts, peer behavioral indicators, and process variable data allows schools to better understand their students, their characteristics related to school functioning, and their values within the school context. For the schools in this study, the assessments used showed *aggression* was socially valued and related to *school belonging*, even though it is a maladaptive characteristic. It is important schools know this information when they create the universal rules, expectations, and other social programs in an effort to reinforce more positive and adaptive valued social characteristics.

Further, this data collection framework can be a valuable tool for adapting Tier 2 interventions, individualizing interventions at Tier 3, and progress monitoring by providing a more comprehensive view of student functioning and the intervention's effect on that functioning in the school context. For behavior, targeted interventions often rely on a functional behavior assessment (FBA) that focuses on a small number of behaviors (Wehby & Kerns, 2014). This process would benefit from including academic, social, and emotional data to understand what

elicits and maintains the target behavior. For example, a standard FBA may show a student displays aggressive behavior when asked to complete independent work, which is considered an escape behavior. Yet, data from this study's framework may show the student acts out in a particular classroom because he is trying to maintain his *social prominence* and the peers in this classroom value *aggression* over work completion. So by decreasing this student's aggressive outbursts, the student's *social prominence* decreases, which will hinder the sustainability and effectiveness of the intervention. They may have lower *aggression* temporarily, but their loss in *social prominence* may affect other domains of functioning and ultimately lead to poorer longitudinal adaptation.

Additionally, the same considerations can be made with academic interventions. As students age, they become very aware of social dynamics that can make them stand out negatively to their peers (Pellegrini, 2002), and participation in interventions that require them to be pulled out of the general classroom or draw attention to academic deficits can negatively hinder their *social prominence* and increase the likelihood of them being *picked on*, which will hinder their buy-in to the intervention. When looking at academic outcomes, this study highlights the importance of looking beyond cognition and processing. Meaning, if an academic intervention is not effective or student grades continue to suffer despite academic interventions, there could be other behavioral, social, and emotional forces affecting these outcomes. Therefore, when intensifying both academic and behavioral interventions, this study showed it is imperative to consider the intervention's effect on the student and the context in which they are embedded. Further, the trajectories and outcomes associated with this study can inform the progress monitoring process by providing a comprehensive blueprint of what and how to study a student's response to an intervention. Future research can explore ways to feasibly incorporate this study's data collection

and analysis process into MTSS and study its effects on intervention efficacy.

Moving forward, this study extends multiple lines of inquiry. As noted above, more strenuous IOA analysis and additional CFAs are needed to confirm the validity and utility of the decision rule process. Evidence of social validity also needs to be collected with trained practitioners, interventionists, and other school personnel. During the refinement of the decision rule process, it may be beneficial to rename the configurations. These labels are common within the ICP literature base; however, they could encourage a static or fixed mindset with practitioners. Changing the names (e.g., Model to Adaptive and Troubled to Maladaptive, etc.) can help emphasize the malleable and dynamic nature of these characteristics and student pathways within the configurations. Further analysis and refinement is also needed for this data-collection framework to help schools collect developmental information over time to better inform potential student trajectories and the progress monitoring process. Moreover, much of the ICP configuration literature focuses on boys and girls separately; therefore, more data is needed to explore potential differences among boys and girls and how these differences can be addressed with the decision rule process. A strength of this study is it's contextual nature. A particular school's student population and their specific needs and outcomes drive this data analysis process. However, because of this, the data collection process and analysis needs to be explored with different schools, in different locations, and with different student demographics to better understand developmental trajectories within various populations.

Conclusion

In conclusion, this study expanded the role of developmental science for the data-based individualization process in special education. First, it established a process practitioners can use to place SWD in configurations informed by interpersonal competencies. Furthermore, the

results of the regressions and prodigal analysis provided insight into the configurations, peer behavior indicators, and process variables that can be used as tools for clarifying differential patterns of adjustment and developmental mechanisms that are associated with different trajectories and outcomes in middle school. This type of data gets to special education's core principle of individualization by providing insights into SWD's specific strengths and needs, and how these factors interact in the school environment to inform more responsive interventions that could push the field forward and ultimately benefit student outcomes.

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Appendix A

Decision Rule Process

ICS-T Description

- The ICS-T has three core and three subsidiary components or factors. The core components drive the decision, however; for particular configurations, the subsidiary components play an important role in the decision process.
- **Primary Items:** Aggression, Academic, Popularity
- **Subsidiary Items:** Affiliative, Olympian, Internalizing
- Cairns et al., 1995

Decision Rules

Configuration descriptions based on prior studies using person-centered approaches (Chen et al., 2019; Farmer et al., 1999; Farmer et al., 2008)

	Aggression	**Academic**	**Popularity**	**Affiliative**	**Olympian**	**Internalizing**
Model	Below Average	Above Average	Above Average	Above Average	Above Average	Below Average
Passive	Below Average	Below Average	Below Average	Below Average	Below Average	Above Average
Tough	Above Average	Average	Average	Above Average/ Average	Above Average/ Average	Below Average
Troubled	Above Average	Below Average	Below Average	Below Average	Below Average	Average / Above Average
Neutral	Below Average	Average	Average	Average	Average	Above Average

- Determining Score Category: Above or below 1 Likert unit (1-7) from the sample average determines if the student is considered below average, average, and above average.
    - 1 Likert unit above = above average
    - 1 Likert unit below = below average
        - For example, if the sample average is 3, for a student to be considered below average their score must fall below a 3 (i.e. 2.99 and below), average would be anywhere in the 3 range, and above average would be a 4 and above.

- If the *student* or *sample average* is a decimal, round to the nearest whole number, then use the 1 Likert above/below average standard.
    - For example, if the average is 4.32, round it to 4. Then use the 1 Likert scale above/below determination. To be considered below average a student must fall below a 4 (i.e. 3.99 and below), average would be anywhere in the 4 range, and above average would be a 5 and above.

- Using literature and exploratory analysis, each configuration has specific score category requirements:

	Aggression	**Academic**	**Popularity**	**Affiliative**	**Olympian**	**Internalizing**
Model	Below Average	Above Average/ Average	Above Average	Above Average/ Average	Above Average/ Average	Below Average/ Average
Passive	Below Average/ Average	Below Average	Below Average	Below Average/ Average	Below Average / Average	Above Average
Tough	Above Average	Above Average/ Average	Above Average/ Average	Average / Above Average	Above Average/ Average	Below Average / Average
Troubled	Above Average	Below Average	Below Average	Below Average/ Average	Below Average/ Average	Average / Above Average
Neutral	Below Average/ Average	Average/ Above Average	Average/ Above Average	Average/ Above Average	Average/ Above Average	Average/ Below Average

- A complete list of configuration requirements along with noted exceptions are described below:

1. **Model**
    a. Primary: *Aggression* below average, *Academic* above average, and *Popularity* above average
    b. Sub: *Affiliative* and *Olympian* above average/average, and *Internalizing* average/below average
    c. Exception:
        i. SPED can be below average/average in *Academic*
2. **Passive:**
   ***Internalizing MUST be above average**
    a. Primary: *Aggression* below average, *Academic* below average, *Popularity* below average
    b. Sub: *Affiliative* and *Olympian* above average/average/below average, *Internalizing* above average
    c. Exception:
        i. SPED student can be below average in *Academic* (does not count against them). If SPED is below average in *Academic*, student needs to below average in *Popularity* to be considered Passive.

ii. If *Internalizing* is 2 units above mean, but other requirements put student in the *Neutral* configuration, the student is considered Passive

3. **Tough**

   ***Aggression MUST be above average**

   a. Primary: *Aggression* above average, and *Academic* and *Popularity* can be average/above average
   b. Sub: *Affiliative* and *Olympian* below average/average/above average, and *Internalizing* below average/average
   c. Exception:
      i. If *Aggression* is above average, either *Academic* or *Popular* must be above average (just one of these two factors must be above average to be considered Tough)
      ii. SPED student can be below average in *Academic* (does not count against them). If SPED is below average in *Academic*, student needs to be above average in *Popularity* to be considered Tough.
      iii. If *Aggression* is 2 units above mean but other requirements put student in the *Neutral* configuration, the student is considered Tough

4. **Troubled**

   a. Primary: *Aggression* above average, *Academic* below average, *Popularity* below average
   b. Sub: *Affiliative* and *Olympian* below average/average, and *Internalizing* above average/average
   c. Exception:
      i. If student has above average scores for both *Aggression* and *Internalizing*, they qualify for the Troubled configuration

5. **Neutral**

   a. Core: *Aggression* below average/average, *Academic* average/above average, and *Popularity* average/above average
   b. Sub: *Affiliative*, *Olympian,* and *Internalizing* can be above average/average/below average
   c. Exceptions:
      i. 2 of the 3 core items need to qualify as Neutral
         - SPED students can be below average in *Academic* (does not count against them). If SPED is below average in Academic, student needs to fulfill 1 of 2 core items (i.e., below average/average in *Aggression* or average/above average in *Popularity*)
      ii. If *Aggression* is 2 units above mean but other requirements put student in the Neutral configuration, the student is considered Tough
      iii. If *Internalizing* is 2 units above mean but other requirements put student in the *Neutra*l configuration, the student is considered Passive

Appendix B

Table B1

Correlations Among Study Variables in Wave 2

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Demographic															
1. Gender	1														
2. Minority	.01	1													
3. FRL	-.01	.42**	1												
Predictors															
4. Disability	.13**	.01	.09**	1											
5. Model	.	.	.	.	.										
6. Passive	.	.	.	.	.	.									
7. Tough	.	.	.	.	.	.	.								
8. Troubled	.	.	.	.	.	.	.	.							
9. Neutral	.01	.06**	.01	.03	.	.	.	.	1						
Outcomes															
10. Reading	-.13**	-.10*	-.18**	-.33**	.	.	.	.	-.05	1					
11. Math	-.04	-.10*	-.21**	-.15**	.	.	.	.	.08	.62**	1				
12. Days Absent	.04	-.05	.09	.13**	.	.	.	.	-.11**	-.09	-.13**	1			
13. Days Suspended	.09	.03	.10*	.02	.	.	.	.	-.11*	-.10*	-.18**	.50**	1		
14. SDQ	-.22**	-.02	.07**	.05**	.	.	.	.	.01	-.01	.04	-.01	-.02	1	

*$p < .05$. **$p < .01$.

Appendix C

Table C1

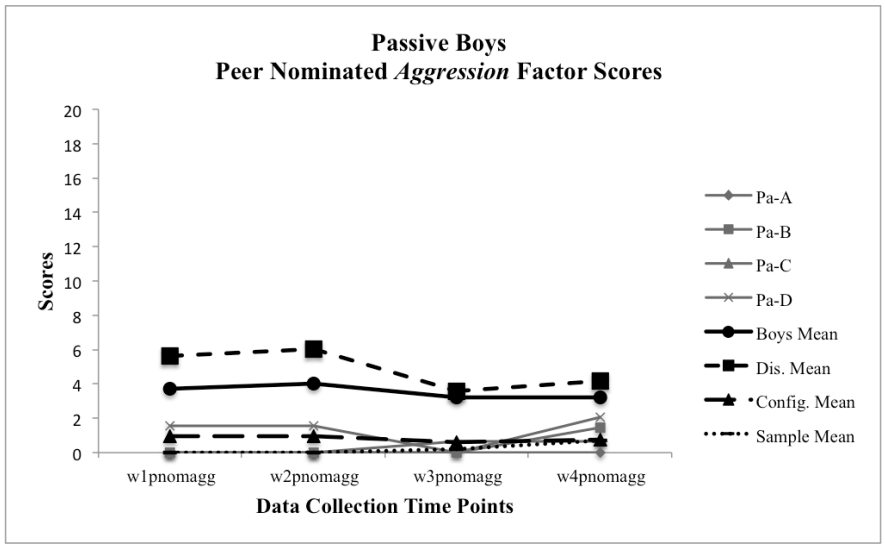
Correlations Among Study Variables in Wave 4

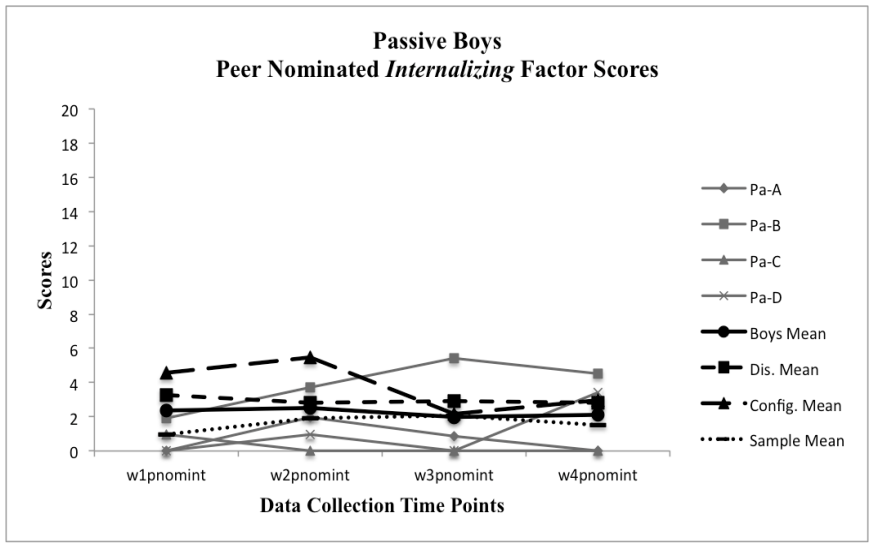
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Demographic															
1. Gender	1														
2. Minority	.01	1													
3. FRL	-.01	.42**	1												
Predictor															
4. Disability	.13**	.01	.09**	1											
5. Model	.	.	.	.	.										
6. Passive	.	.	.	.	.	.									
7. Tough	.	.	.	.	.	.	.								
8. Troubled	.	.	.	.	.	.	.	.							
9. Neutral	.03	0.06**	0.01	.03	.	.	.	.	1						
Outcomes															
10. Reading	-.14**	-.11*	-.17**	-.27**	.	.	.	.	.11**	1					
11. Math	-.02	-0.03	-.19**	-.18**	.	.	.	.	.14**	.62**	1				
12. Days Absent	-0.09	-.15**	.14**	0.073	.	.	.	.	-.09*	-0.13**	-.20**	1			
13. Days Suspended	0.03	0.04	.13**	0.14**	.	.	.	.	-.13**	-0.23**	-.25**	.38**	1		
14. SDQ	-.36**	-.14**	-0.13*	-.05	.	.	.	.	-.03	.04	-.04	.11**	-0.03	1	
15. SCARED	-.24**	-.09	.01	.03	.	.	.	.	-.06	.11*	.04	.05	-.08	.50**	1

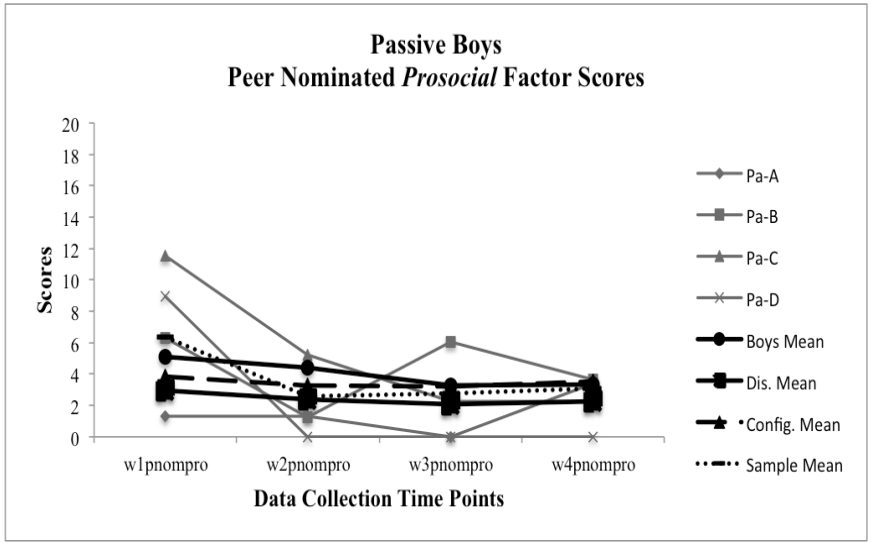
*$p < .05$. **$p < .01$.

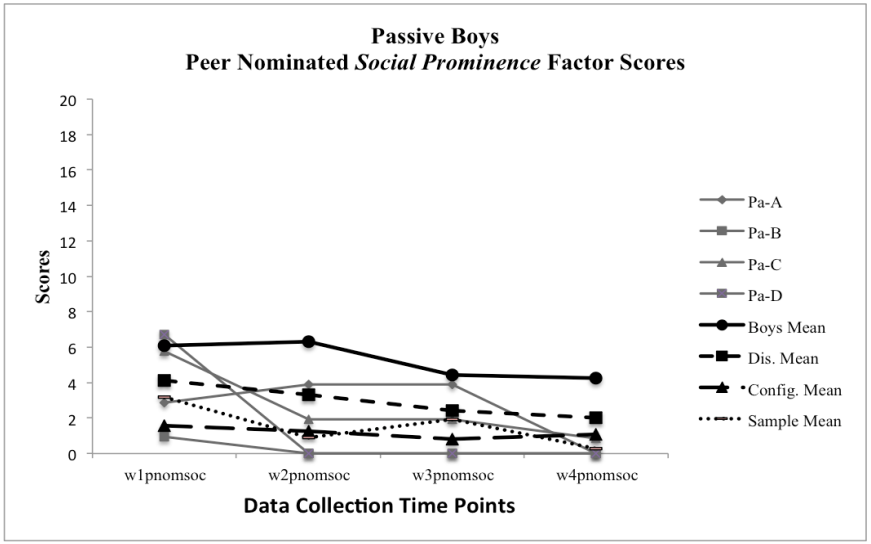
Appendix D

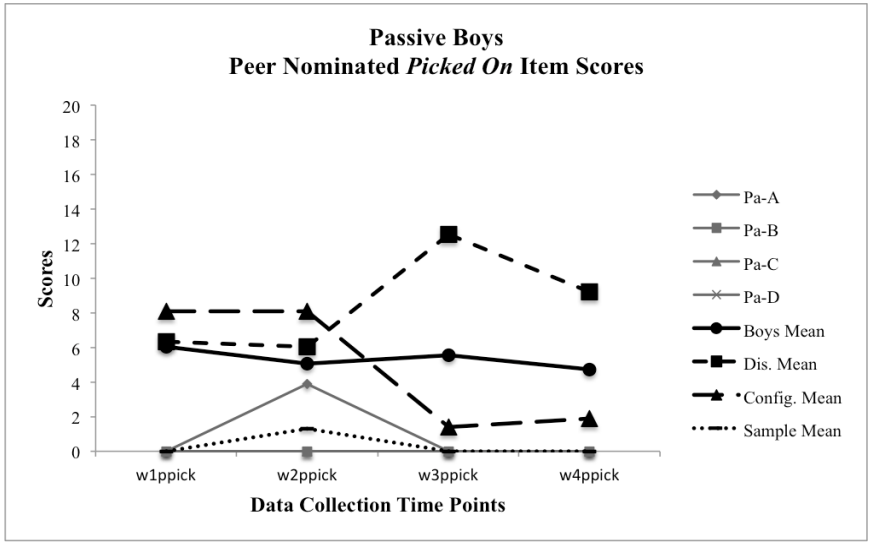
Passive Boys Graphs for Prodigal Analysis





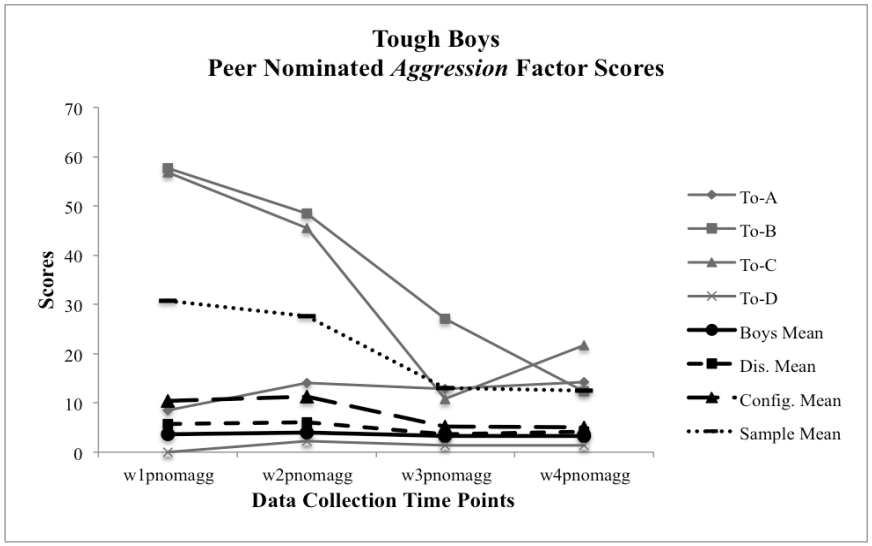

Passive Boys
Peer Nominated *Prosocial* Factor Scores
Scores
20
18
16
14
12
10
8
6
4
2
0
w1pnompro
w2pnompro
w3pnompro
w4pnompro
Data Collection Time Points
Pa-A
Pa-B
Pa-C
Pa-D
Boys Mean
Dis. Mean
Config. Mean
Sample Mean

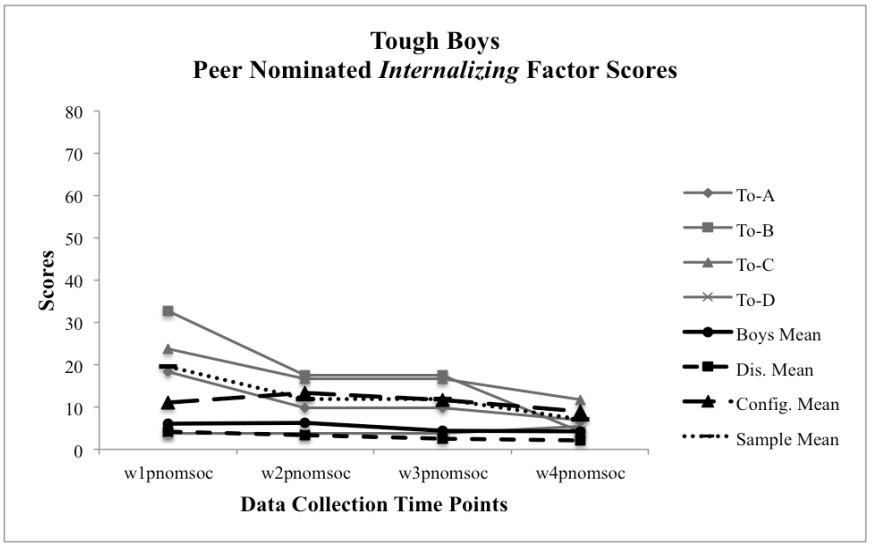

Passive Boys
Peer Nominated *Social Prominence* Factor Scores
Scores
20
18
16
14
12
10
8
6
4
2
0
w1pnomsoc
w2pnomsoc
w3pnomsoc
w4pnomsoc
Data Collection Time Points
Pa-A
Pa-B
Pa-C
Pa-D
Boys Mean
Dis. Mean
Config. Mean
Sample Mean

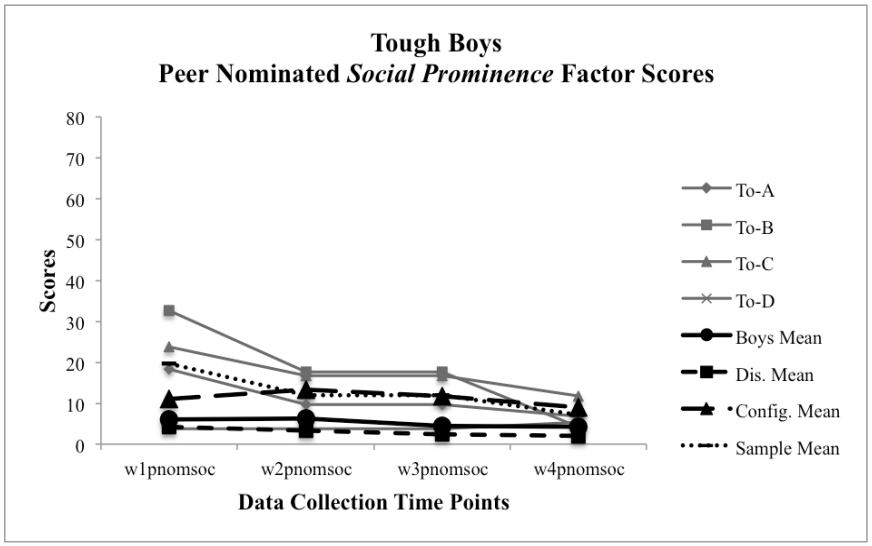

Passive Boys
Peer Nominated *Picked On* Item Scores
Scores
20
18
16
14
12
10
8
6
4
2
0
w1ppick
w2ppick
w3ppick
w4ppick
Data Collection Time Points
Pa-A
Pa-B
Pa-C
Pa-D
Boys Mean
Dis. Mean
Config. Mean
Sample Mean

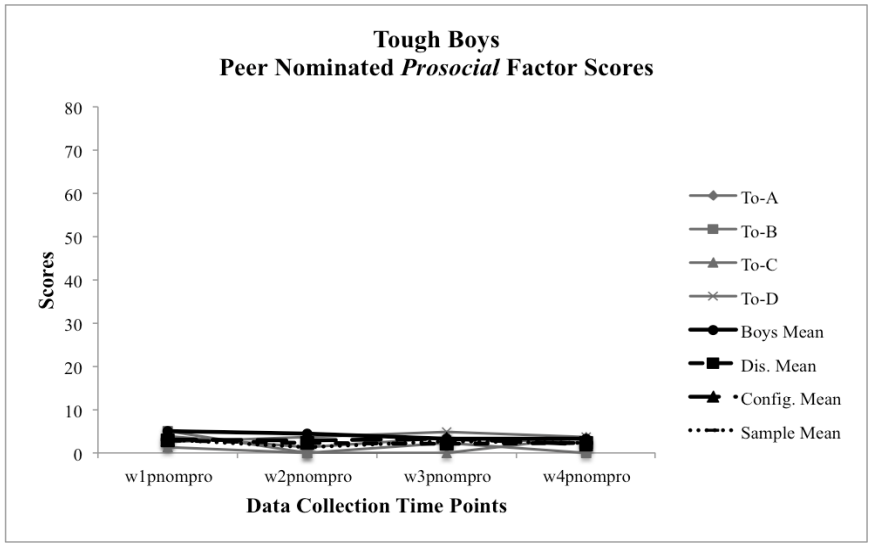
Appendix E

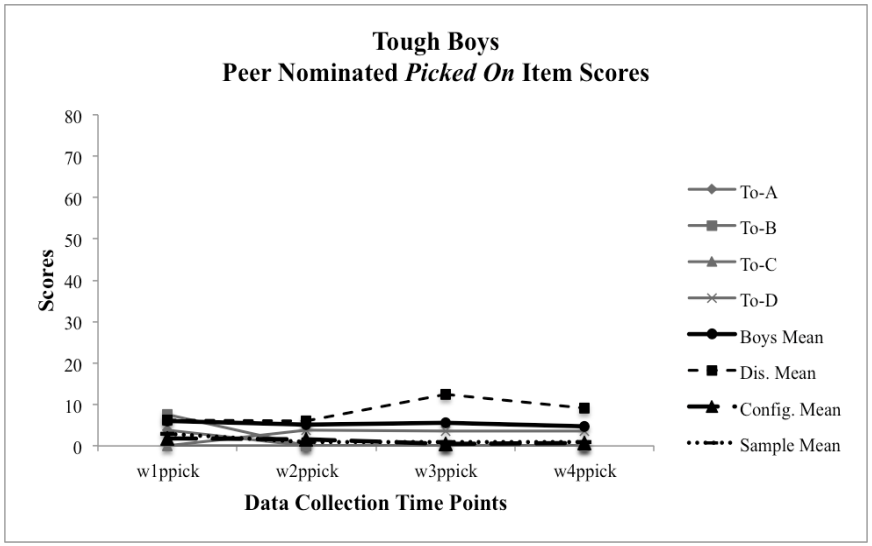
Tough Boys Graphs for Prodigal Analysis





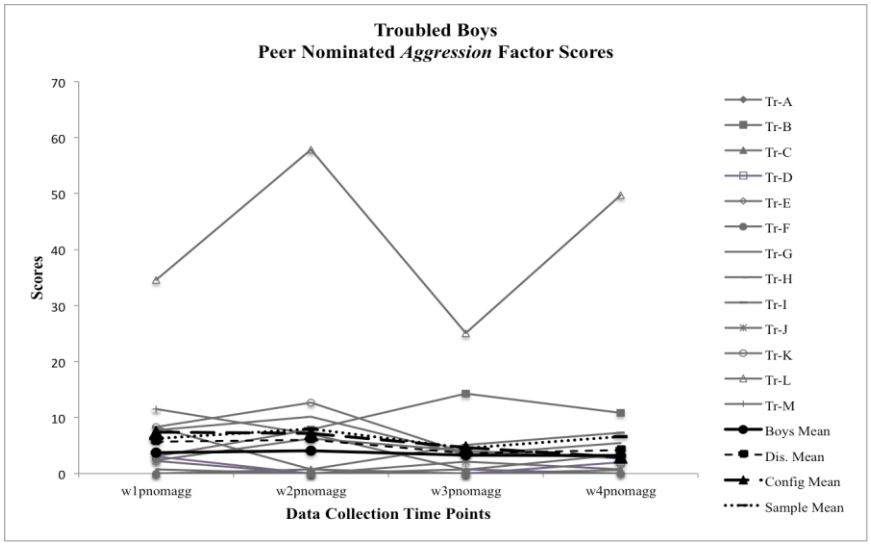

Tough Boys
Peer Nominated *Social Prominence* Factor Scores
Scores
80
70
60
50
40
30
20
10
0
w1pnomsoc
w2pnomsoc
w3pnomsoc
w4pnomsoc
Data Collection Time Points
To-A
To-B
To-C
To-D
Boys Mean
Dis. Mean
Config. Mean
Sample Mean

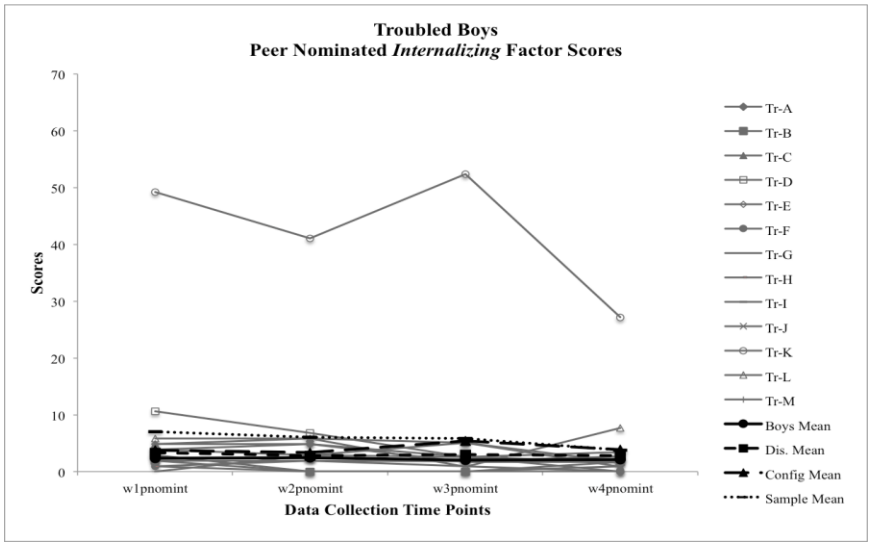

Tough Boys
Peer Nominated *Prosocial* Factor Scores
Scores
80
70
60
50
40
30
20
10
0
w1pnompro
w2pnompro
w3pnompro
w4pnompro
Data Collection Time Points
To-A
To-B
To-C
To-D
Boys Mean
Dis. Mean
Config. Mean
Sample Mean

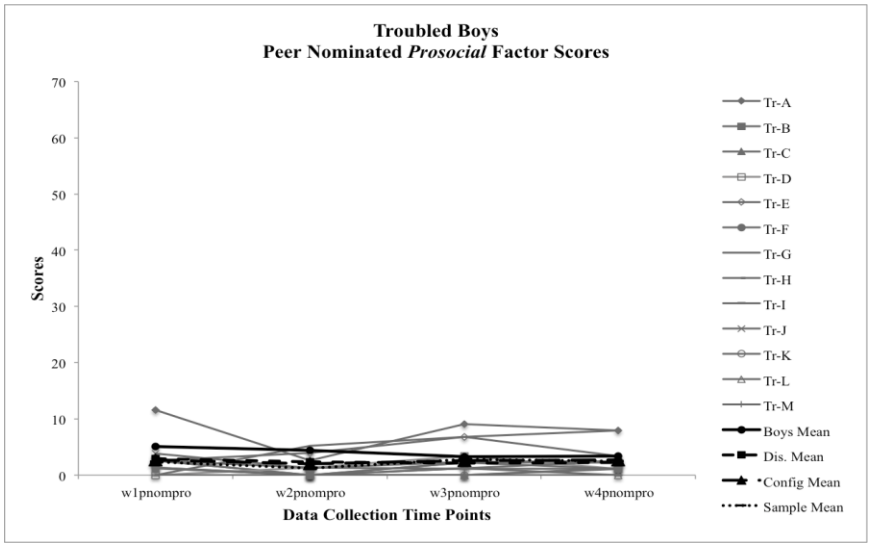

Tough Boys
Peer Nominated *Picked On* Item Scores
Scores
80
70
60
50
40
30
20
10
0
w1ppick
w2ppick
w3ppick
w4ppick
Data Collection Time Points
To-A
To-B
To-C
To-D
Boys Mean
Dis. Mean
Config. Mean
Sample Mean

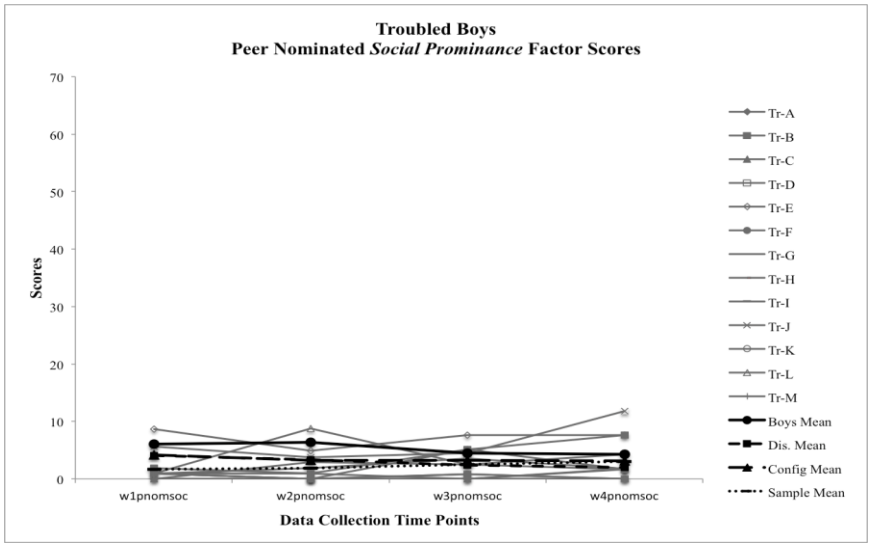
Appendix F

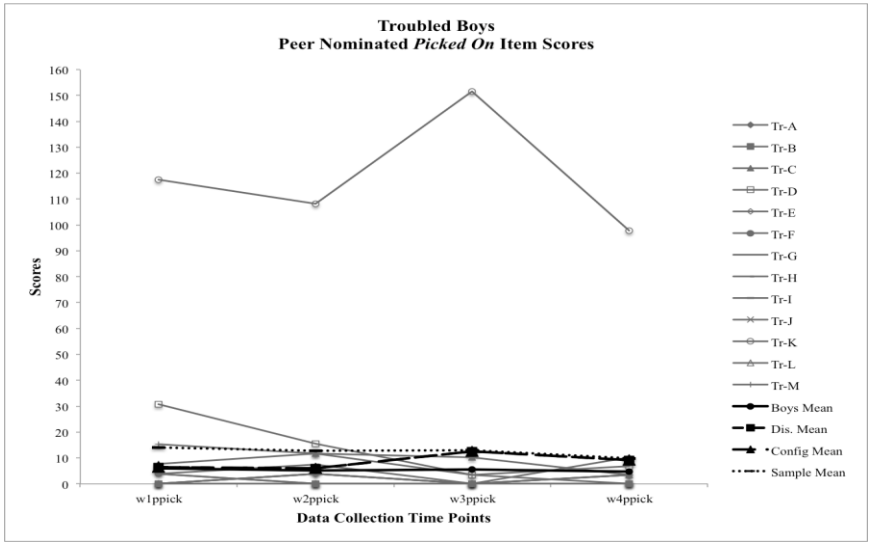
Troubled Boys for Prodigal Analysis





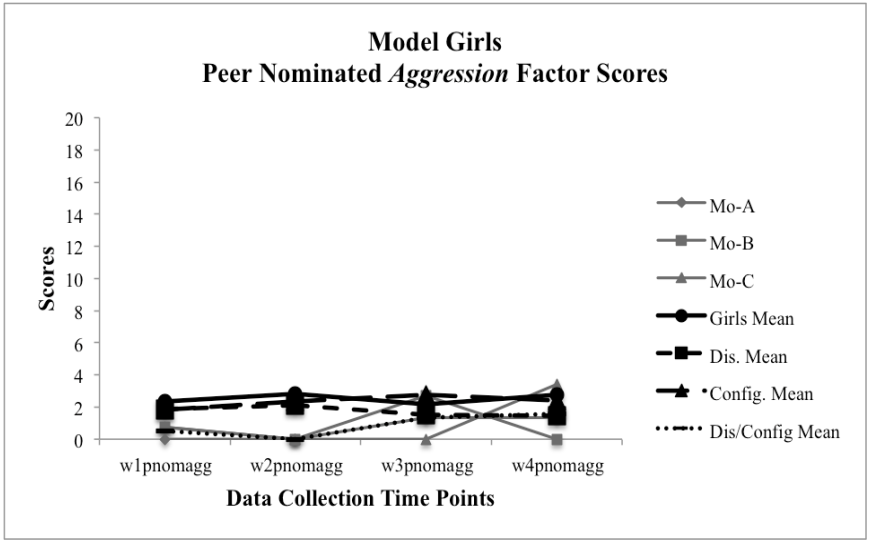

Troubled Boys
Peer Nominated *Prosocial* Factor Scores
Scores
70
60
50
40
30
20
10
0
w1pnompro
w2pnompro
w3pnompro
w4pnompro
Data Collection Time Points
Tr-A
Tr-B
Tr-C
Tr-D
Tr-E
Tr-F
Tr-G
Tr-H
Tr-I
Tr-J
Tr-K
Tr-L
Tr-M
Boys Mean
Dis. Mean
Config Mean
Sample Mean

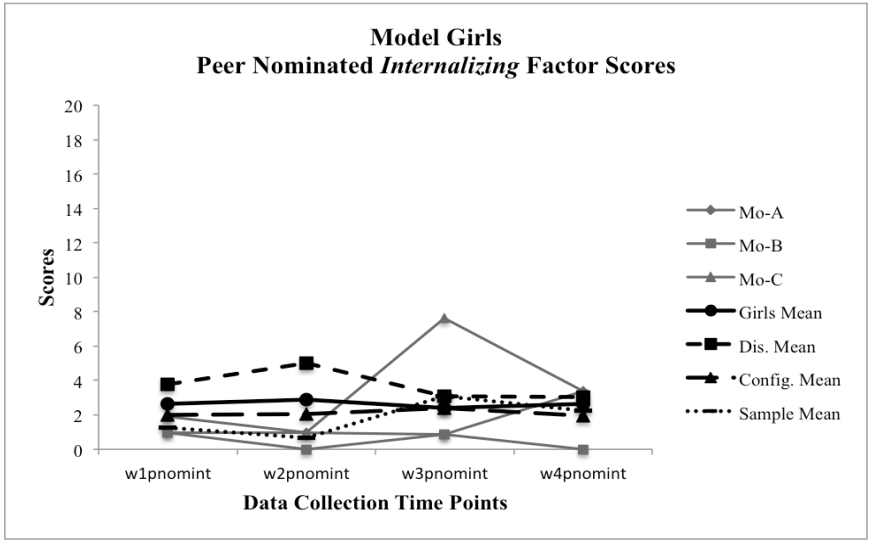

Troubled Boys
Peer Nominated *Social Prominance* Factor Scores
Scores
70
60
50
40
30
20
10
0
w1pnomsoc
w2pnomsoc
w3pnomsoc
w4pnomsoc
Data Collection Time Points
Tr-A
Tr-B
Tr-C
Tr-D
Tr-E
Tr-F
Tr-G
Tr-H
Tr-I
Tr-J
Tr-K
Tr-L
Tr-M
Boys Mean
Dis. Mean
Config Mean
Sample Mean

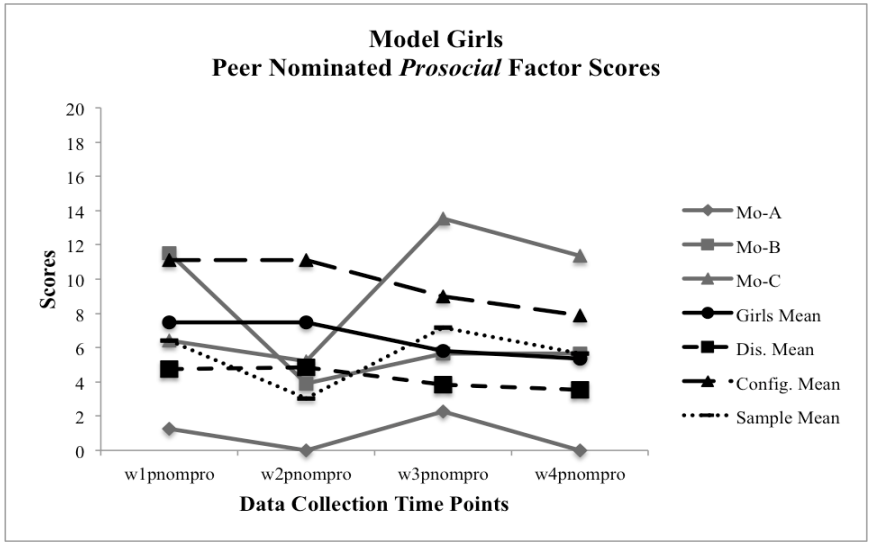

Troubled Boys
Peer Nominated *Picked On* Item Scores
Scores
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
w1ppick
w2ppick
w3ppick
w4ppick
Data Collection Time Points
Tr-A
Tr-B
Tr-C
Tr-D
Tr-E
Tr-F
Tr-G
Tr-H
Tr-I
Tr-J
Tr-K
Tr-L
Tr-M
Boys Mean
Dis. Mean
Config Mean
Sample Mean

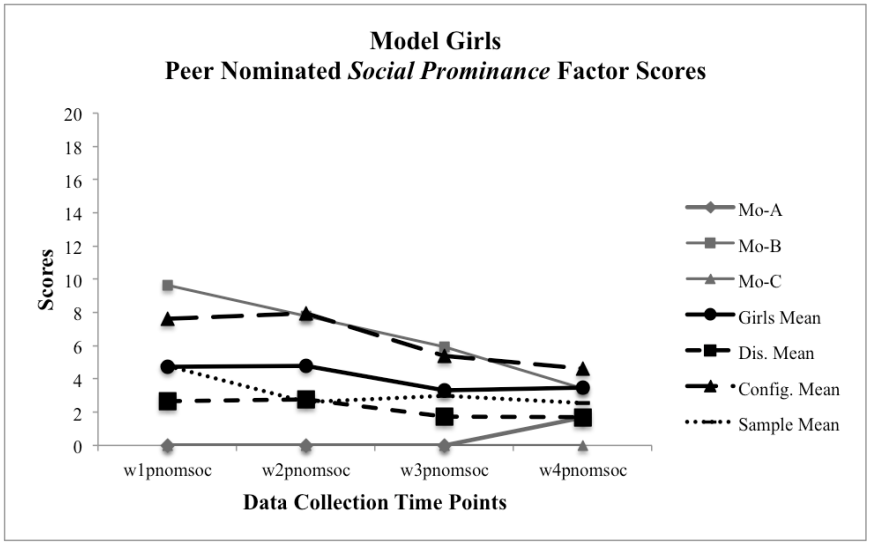
Appendix G

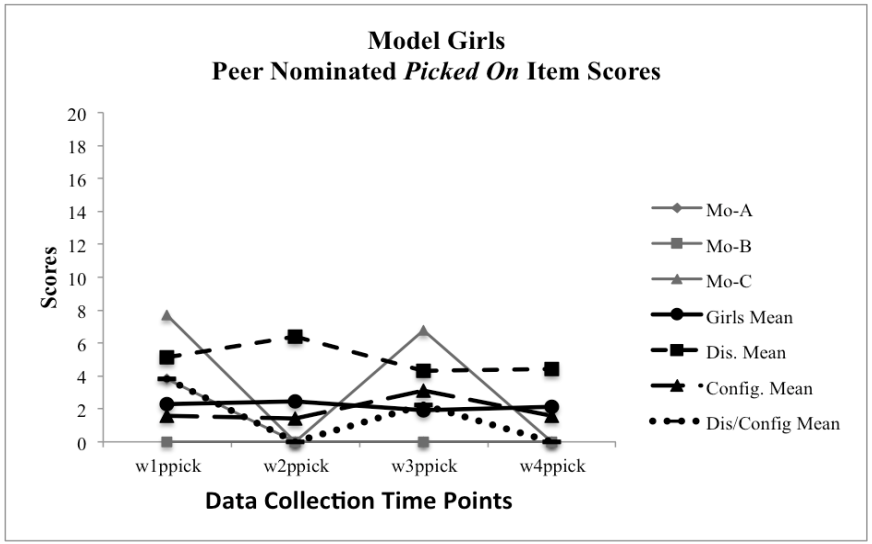
Model Girls Graphs for Prodigal Analysis





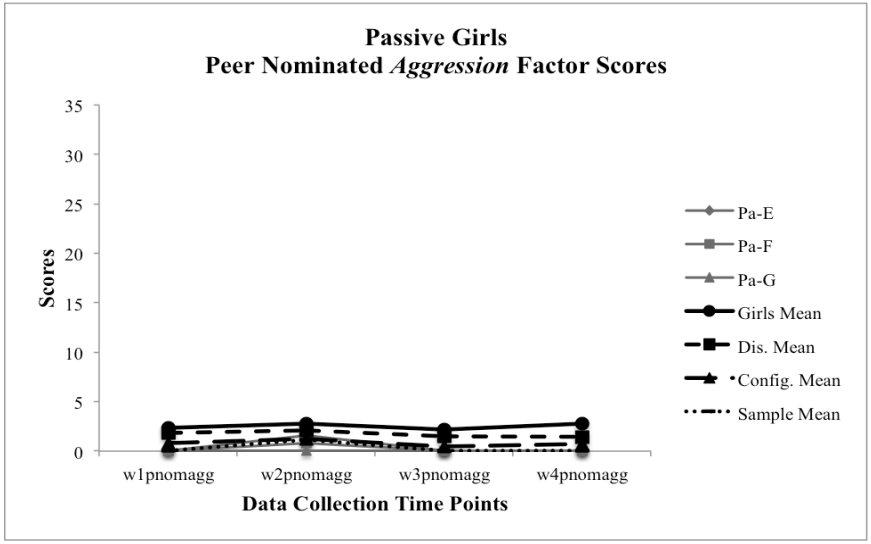

Model Girls
Peer Nominated *Prosocial* Factor Scores
Scores
20
18
16
14
12
10
8
6
4
2
0
w1pnompro
w2pnompro
w3pnompro
w4pnompro
Data Collection Time Points
Mo-A
Mo-B
Mo-C
Girls Mean
Dis. Mean
Config. Mean
Sample Mean

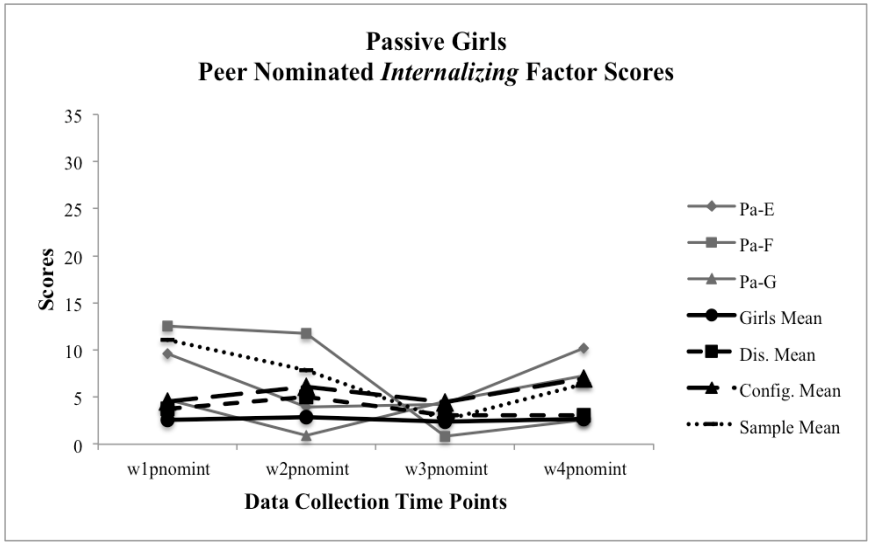

Model Girls
Peer Nominated *Social Prominance* Factor Scores
Scores
20
18
16
14
12
10
8
6
4
2
0
w1pnomsoc
w2pnomsoc
w3pnomsoc
w4pnomsoc
Data Collection Time Points
Mo-A
Mo-B
Mo-C
Girls Mean
Dis. Mean
Config. Mean
Sample Mean

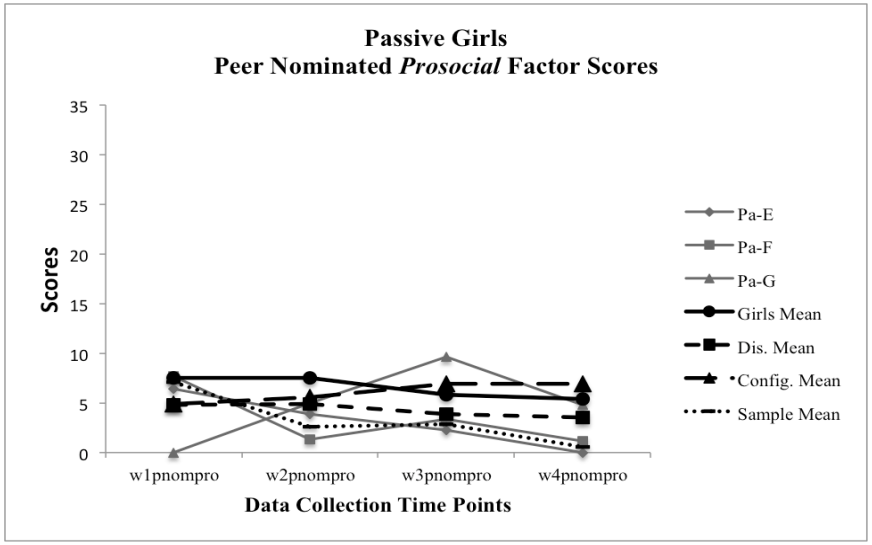

Model Girls
Peer Nominated *Picked On* Item Scores
Scores
20
18
16
14
12
10
8
6
4
2
0
w1ppick
w2ppick
w3ppick
w4ppick
Data Collection Time Points
Mo-A
Mo-B
Mo-C
Girls Mean
Dis. Mean
Config. Mean
Dis/Config Mean

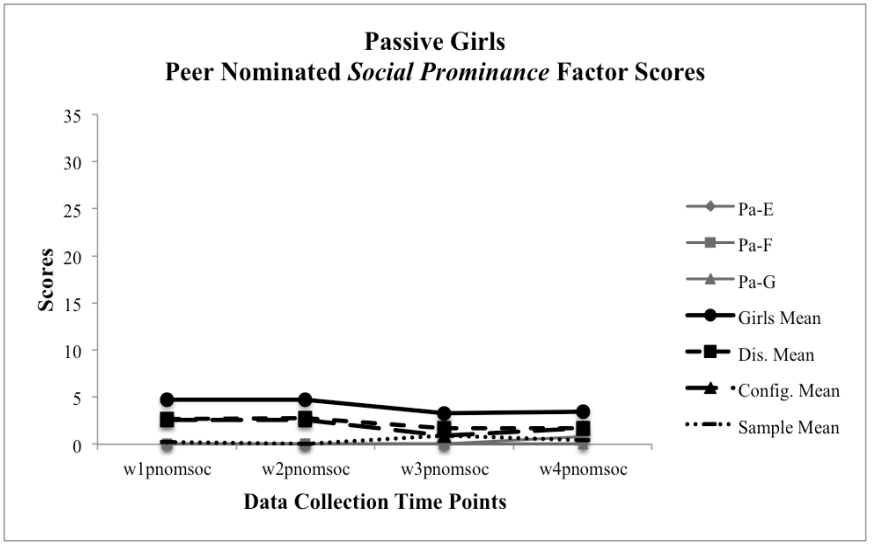
Appendix H

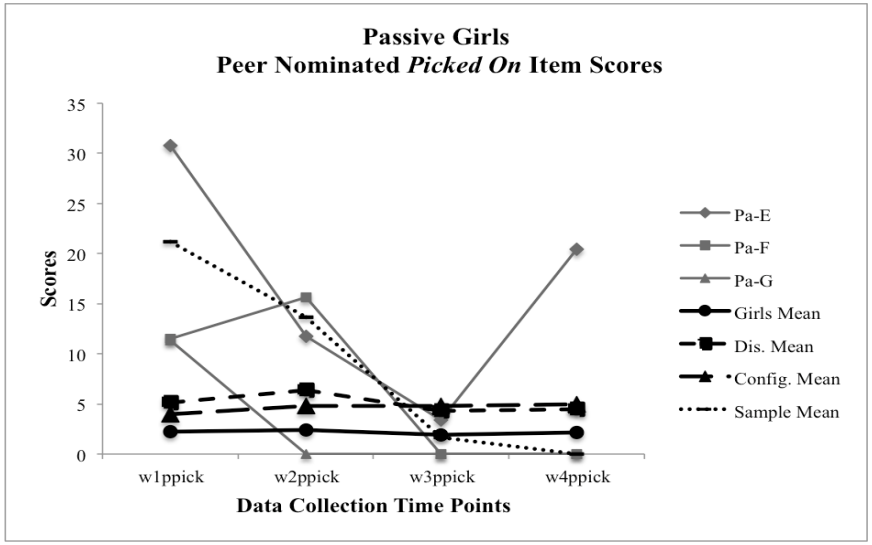
Passive Girls Graphs for Prodigal Analysis





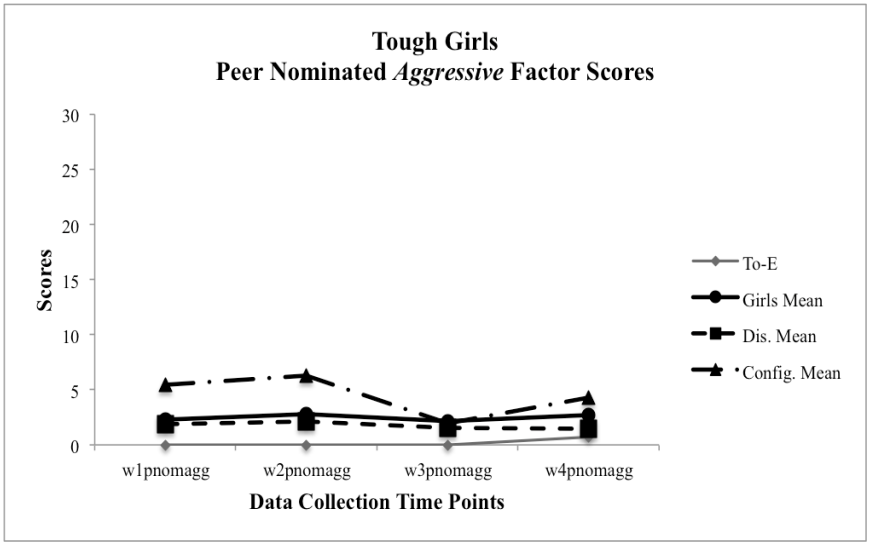

Passive Girls
Peer Nominated *Prosocial* Factor Scores
Scores
35
30
25
20
15
10
5
0
w1pnompro
w2pnompro
w3pnompro
w4pnompro
Data Collection Time Points
Pa-E
Pa-F
Pa-G
Girls Mean
Dis. Mean
Config. Mean
Sample Mean

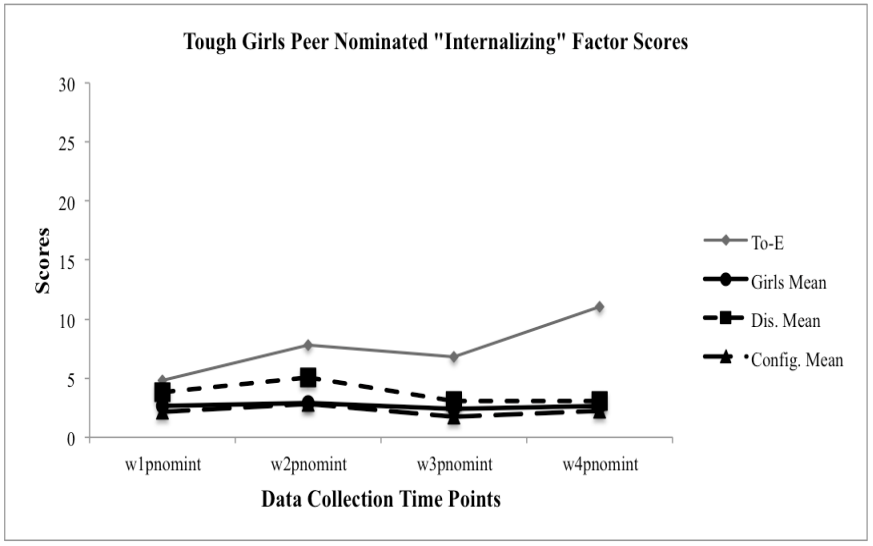

Passive Girls
Peer Nominated *Social Prominance* Factor Scores
Scores
35
30
25
20
15
10
5
0
w1pnomsoc
w2pnomsoc
w3pnomsoc
w4pnomsoc
Data Collection Time Points
Pa-E
Pa-F
Pa-G
Girls Mean
Dis. Mean
Config. Mean
Sample Mean

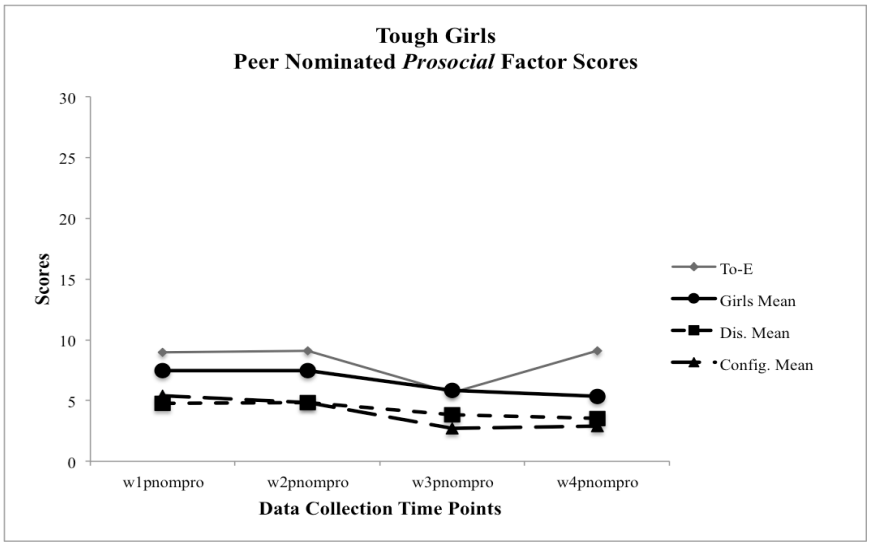

Passive Girls
Peer Nominated *Picked On* Item Scores
Scores
35
30
25
20
15
10
5
0
w1ppick
w2ppick
w3ppick
w4ppick
Data Collection Time Points
Pa-E
Pa-F
Pa-G
Girls Mean
Dis. Mean
Config. Mean
Sample Mean

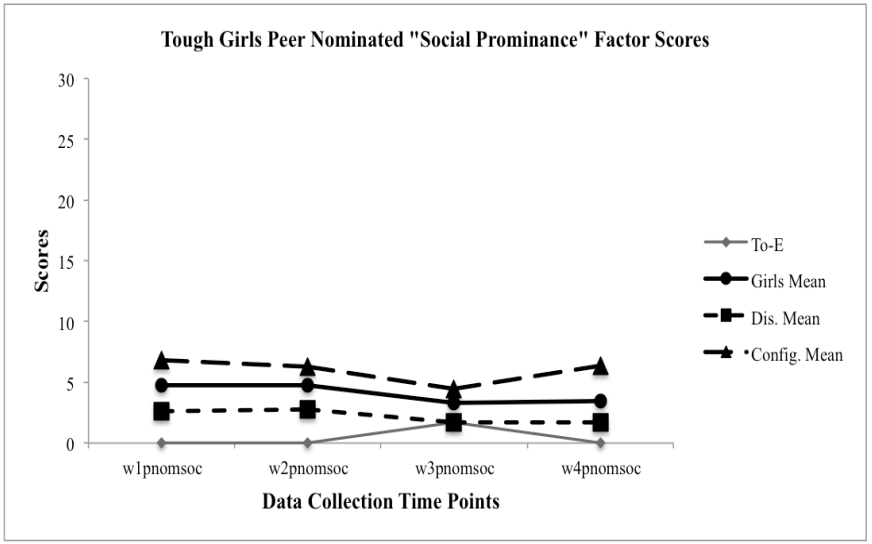
Appendix I

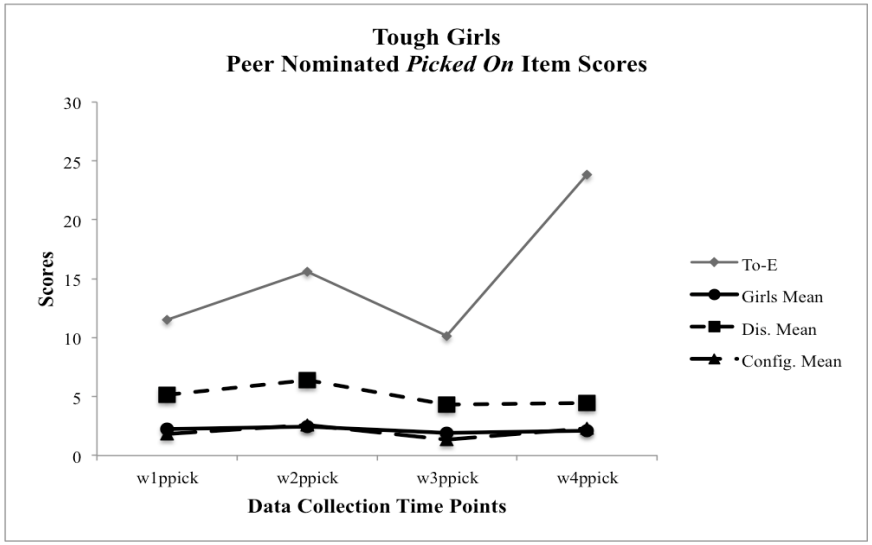
Tough Girls Graphs for Prodigal Analysis





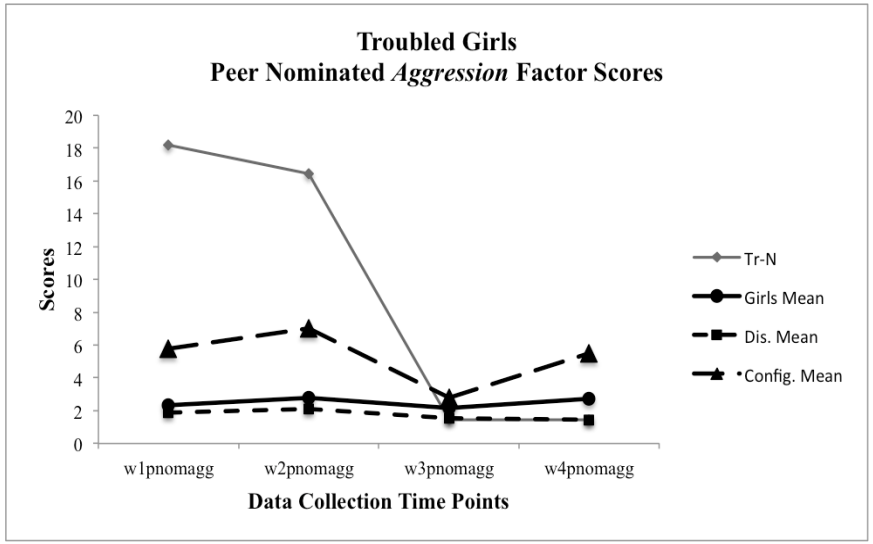

Tough Girls
Peer Nominated *Prosocial* Factor Scores
Scores
30
25
20
15
10
5
0
w1pnompro
w2pnompro
w3pnompro
w4pnompro
Data Collection Time Points
To-E
Girls Mean
Dis. Mean
Config. Mean

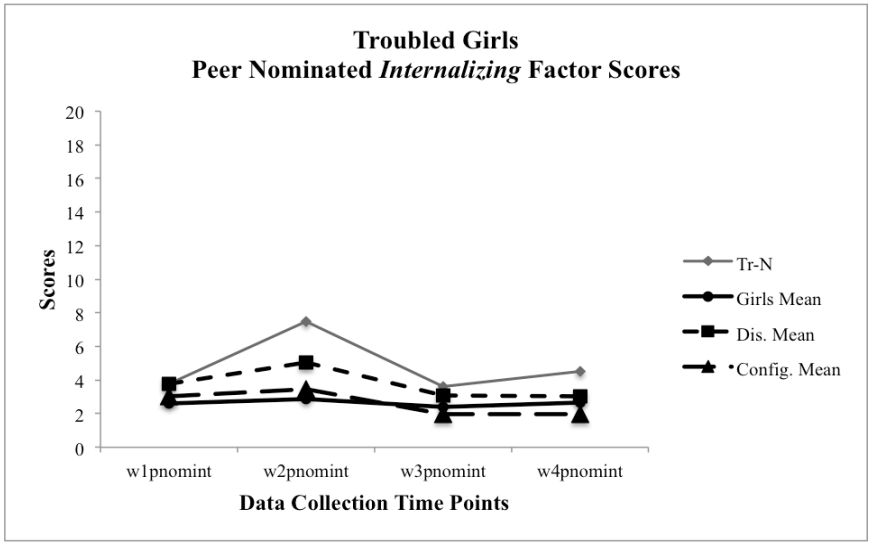

Tough Girls Peer Nominated "Social Prominance" Factor Scores
Scores
30
25
20
15
10
5
0
w1pnomsoc
w2pnomsoc
w3pnomsoc
w4pnomsoc
Data Collection Time Points
To-E
Girls Mean
Dis. Mean
Config. Mean

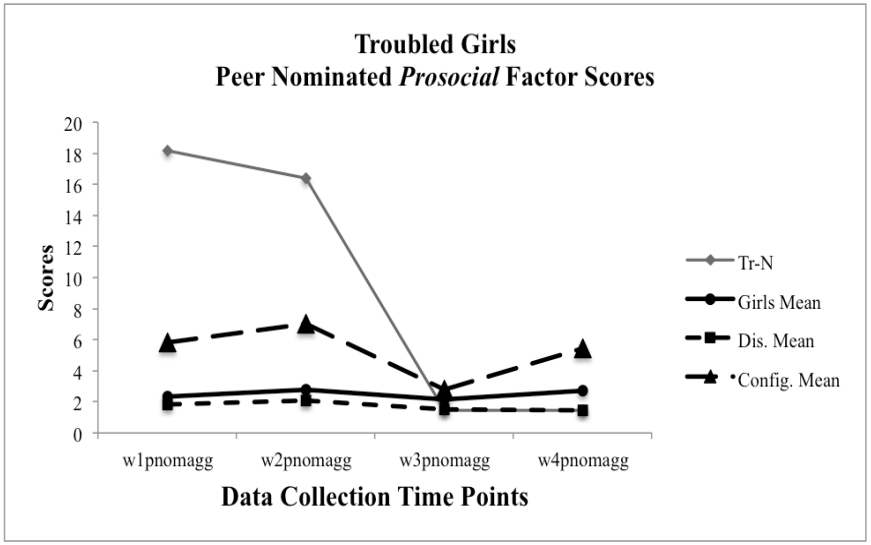

Tough Girls
Peer Nominated *Picked On* Item Scores
Scores
30
25
20
15
10
5
0
w1ppick
w2ppick
w3ppick
w4ppick
Data Collection Time Points
To-E
Girls Mean
Dis. Mean
Config. Mean

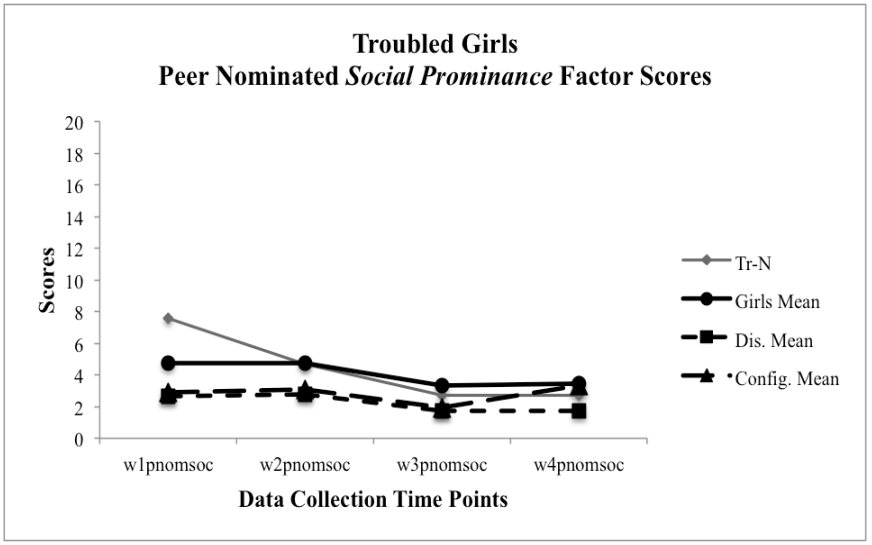
Appendix J

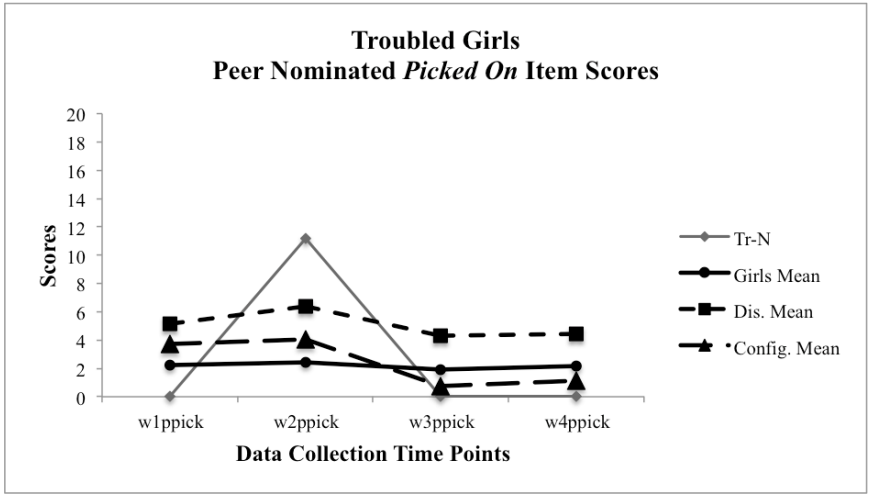
Troubled Girls Graphs for Prodigal Analysis






Troubled Girls
Peer Nominated *Prosocial* Factor Scores
Scores
20
18
16
14
12
10
8
6
4
2
0
w1pnomagg
w2pnomagg
w3pnomagg
w4pnomagg
Data Collection Time Points
Tr-N
Girls Mean
Dis. Mean
Config. Mean


Troubled Girls
Peer Nominated *Social Prominance* Factor Scores
Scores
20
18
16
14
12
10
8
6
4
2
0
w1pnomsoc
w2pnomsoc
w3pnomsoc
w4pnomsoc
Data Collection Time Points
Tr-N
Girls Mean
Dis. Mean
Config. Mean


Troubled Girls
Peer Nominated *Picked On* Item Scores
Scores
20
18
16
14
12
10
8
6
4
2
0
w1ppick
w2ppick
w3ppick
w4ppick
Data Collection Time Points
Tr-N
Girls Mean
Dis. Mean
Config. Mean