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CHILDHOOD TEMPERAMENT AND ITS EFFECTS ON ADJUSTMENT TO
COLLEGE

by
Ashley L. Prim

A Thesis

Submitted in partial fulfillment of the requirements of the
Master of Arts Degree
of
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at
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ABSTRACT

Ashley Prim
CHILDHOOD TEMPERAMENT AND ITS EFFECTS ON ADJUSTMENT TO
COLLEGE

2008/09

Dr. Roberta Dihoff and Dr. Klanderma
Masters of Arts in School Psychology

The purpose of this study was to determine whether temperaments seen in early childhood would have an effect on adjustment throughout life, especially during adjustment to college. Specifically, the researcher hypothesized that children with easy temperaments would have an easier time adjusting to college; whereas, children with slow-to-warm-up or difficult temperaments would have a more difficult time adjusting to college. A self-created survey was distributed to 30 undergraduate psychology students at Rowan University. The survey consisted of temperament and adjustment measures. Correlations were run using SPSS in order to determine the effects of temperament on adjustment to college. While the data did not yield significant results, some interesting trends were uncovered.

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Chapter One: The Problem

Need

For some, the transition to college is an exciting milestone. For others, it is the source of great anxiety and discomfort. What causes these differences in coping and adjustment to new experiences? It seems as though these differences are fueled by temperamental characteristics on an individual basis. That is, each person has their own set of temperamental traits that affect their responses to new situations. These temperamental characteristics can be seen in our earliest stages of life. From the first expressions of personality, a parent is able to determine the temperamental style of their infant. Most researchers tend to define temperament as a biologically based set of individual differences in reactivity and self-regulation (Rothbart, Ahadi, & Evans, 2000). Thomas and Chess (1977) broke down these individual differences into nine categories: mood, approach-withdrawal, intensity, threshold, rhythmicity, distractibility, attention span, persistence, and adaptability. Overall, they supported that there were three types of temperament: easy, difficult, and slow to warm up. Their studies prompted the movement for more research to be done on the topic of temperament and personality.

One topic of interest is the consistency of temperament over time. The consensus seems to be that personality traits remain increasingly constant over time. Roberts and DelVecchio (2000) confirmed this assumption with their findings of high levels of trait consistency over the course of a lifetime. This consistency would then explain why temperaments seen in early childhood remain influential throughout the experiences of one's life. In relation to adjustment, this could be described as children who struggle to

adjust to kindergarten, may also struggle to adjust to college—with temperament being a major determining factor.

Based on research of children entering kindergarten, Slee (1986) determined that children with difficult temperaments seem to be more poorly adjusted in comparison to their easy-temperamented counterparts. Slee (1986) also purported that the temperamental characteristic of low adaptability contributed immensely to poor kindergarten adjustment. Similarly, Tubman, Lerner, Lerner, & von Eye (1992) confirmed the “continuity of difficult temperament-adjustment relations” (p. 572). Based on their findings, the researchers concluded that young adults with difficult temperaments would struggle to achieve a good fit when confronted with different contexts in their lives. Concurrently, Newman, Caspi, Moffitt, & Silva (1997) confirmed this continuity in their longitudinal study of 3 year olds and 21 year olds. Their findings support that temperamental styles seen at age 3 are still apparent at age 21.

Much of today’s research has stemmed from Thomas and Chess’s original assumptions about temperament. The relation between temperament and adjustment is apparent. However, the field has had a difficult time in forming a consistent approach to the study of temperament and personality. The search remains for consistency among investigators, terms, and definitions. Many researchers prefer to alter old models by re-labeling and re-defining terms, as they feel appropriate. This inconsistency makes it hard for conclusions to be drawn. Therefore, there is a need to unify the study of temperament and personality.

If temperament is as influential as suspected, these findings can be used to help first-year college students adjust. While some first year students adjust easily, others

struggle to find commonalities among their peers and comfort in their new living environment. The more we know about the effects of temperament on adjustment, the better we can incorporate that information into our integration programs on campuses. Modifications can be implemented, thus providing a more proficient integration for all types of students.

Purpose

This study was created in order to determine the effects of temperament over the life course. Specifically, the researcher wanted to determine whether temperaments found in early childhood would affect the participants' transition into the first year of college. The study will provide further insight into how temperament affects daily functioning and adjustment. From this information, colleges could find new ways to accommodate first year students based on their temperamental needs.

Hypothesis

There has been limited research done on the topic of temperament due to the inconsistency of definitional terms. Previous conclusions point to a significant correlation between childhood temperament and adult temperament. Therefore, this study set out to determine whether early childhood temperament remains consistent over the lifespan, thus affecting one's adjustment to the first year of college. The researcher hypothesized that individuals with easy temperaments in childhood would have an easier transition into college. Those individuals with difficult childhood temperaments would have a harder time adjusting to their first year in college. The null hypothesis stated that

temperament would not have any affects on adjustment to college. This study sought to reject the null hypothesis at a 95 percent confidence level.

Operational Definitions

Temperament:

Individual differences in reactivity and self-regulation assumed to have a constitutional basis (Rothbart, Ahadi, & Evans, 2000).

Constitutional:

The relatively enduring biological makeup of an organism, influenced over time by heredity, maturation, and experience (Rothbart & Derryberry, 1981, p. 40).

Reactivity:

The excitability, responsivity, or arousability of the behavioral and physiological systems of an organism (Rothbart & Derryberry, 1981, p. 40).

Self-regulation:

Neural and behavioral processes functioning to modulate this underlying reactivity (Rothbart & Derryberry, 1981, p. 40).

Easy Temperament:

Temperamental profile marked by regularity, ease of approach to new stimuli, adaptability to change, mild to moderate mood intensity, and a generally positive mood (Thomas & Chess, 1977).

Difficult Temperament:

Temperamental profile marked by irregular patterns of eating and sleeping, withdrawal from new stimuli, do not adapt easily to change, and react intensely to changes, and a generally negative mood (Thomas & Chess, 1977).

Slow-to-adapt/Slow-to-warm-up Temperament:

Temperamental profile marked by withdrawal from new stimuli and difficulty adapting to change, but whose reactions are of mild intensity and gradually become either neutral or positive with repeated exposures to the new event or person (Thomas & Chess, 1977).

Adjustment:

The process of adapting to something (such as new environmental conditions).

Limitations

One major limitation of this study was the small sample size. Since the study was only open to psychology major students at Rowan University, the generalizability and reliability may have been skewed. Also, the diversity of the sample may have been biased due to the rural, predominantly Caucasian population. This lack of diversity may have influenced the results and affected the generalizability compared to other university populations.

Another limitation of this study dealt with the inconsistency in previous research. Researchers have redefined and relabeled key terms repeatedly, thus making it difficult to maintain dependable conclusions. The study was also influenced by the participant's

self-report methods. Due to the inability to survey parents, the study may have been skewed by the answers provided by the participants. Their answers were based on their personal opinions about their childhood temperament. A parental survey would have solved this issue. However, it may have affected response rates if it were to be a requirement of the survey.

Summary

Chapter two included a detailed literature review of temperament and its effects on personality. The literature review also addressed the effects of temperament on adjustment and the first year experience of college freshman. The issues of difficult, easy, and slow-to-warm-up temperaments were discussed.

Chapter three described how the study was designed. The procedures were explained and the population was described. A survey was implemented in order to determine the effects of temperament on adjustment to college.

Chapter four presented the results of the research. The results determined whether temperament is consistent over time, and whether it affects transition to college.

Chapter five included a discussion of results and implications for further research. Implications were discussed, as well as suggestions on how to improve the study.

Chapter Two: Review of the Literature

Introduction

The study of temperament has become an increasingly important aspect of research on lifespan development. Researchers have been preoccupied with determining the effects of temperament on life experiences, and vice versa. They were motivated to determine whether early childhood temperament is consistent throughout the lifespan or whether it was shaped by one's personal experiences over time. As previously stated, this thesis stemmed from previous research pertaining to temperament and adjustment. This chapter focused on the history of personality testing, the need for understanding temperament, consistency of temperament over time, and how temperament affects adjustment to school at different age levels (i.e. preschool, middle school, and college).

Historical Beginnings

The study of personality has been an interest to researchers for almost a century. Personality and temperament testing date back to the early 1900s, when the first personality inventory was created, the Woodworth Personal Data Sheet (Gibby & Zickar, 2008). However, the idea of categorizing personalities and temperaments was seen many centuries prior to this at a time when philosophers such as Galen and Sir Francis Galton existed. Galen was responsible for classifying temperaments based on a certain prevalence of bodily fluids—i.e. blood, yellow bile, black bile, and phlegm. Sir Francis Galton further extended Galen's typologies (Gibby & Zickar, 2008). Although these philosophers and early researchers may not have been completely accurate in their

assumptions and categorizations, they set the pace for a movement that has lasted until the present, and beyond.

The need for determining temperamental types stemmed from an obsession with adjustment prior to the 1950s. The development of the first personality tests set the stage for pinpointing the “negative and maladaptive” proponents of one’s personality (Gibby & Zickar, 2008, p. 167). Mayo (1923) determined that problems at work were highly correlated to mental disintegration and maladjustment. If these maladjusted people were identified, it was believed that productivity would increase (Gibby & Zickar, 2008). Shaffer (1936) determined that maladjustment influenced inefficiency, job dissatisfaction, workplace bullying, and daydreaming, along with other counterproductive behaviors. These maladjusted people were “often over-dependent and, expecting from their superiors in business the same loving consideration that they received from their parents, are thwarted and emotionally upset when they fail to receive it” (Shaffer, 1936, p. 518).

These early influences on the significance of personality testing and adjustment set the stage for the decades to come. Currently, the focus of research is centered on lifespan development and how personality and temperament are major influencing factors of this experience. Specifically, there is much interest dedicated to childhood temperament and its consistency over the span of one’s life. Researchers are dedicated to identifying, defining, and determining the influence of personality and temperament.

Origins and Outcomes of Temperament and Personality

Rothbart, Ahadi, and Evans (2000) argued that temperament could be attributed to our genetics, and was further shaped by the life experience of each individual. The result

of this combination of genetics and experience is presumed to be our adult personality. Therefore, to understand temperament is to understand personality. In defining personality and temperament types, these researchers believed that it would be possible to determine the coinciding outcomes of each type. Rothbart, Ahadi, and Evans (2000) determined that these outcomes of personality and temperament affect one's view of self and others, and their adaptations to the social world.

In contrast, McCrae et al. (2000) argued that personality traits and temperament had a natural origin within each individual. This innate disposition developed autonomously of environmental influence. The researchers supported their five-factor theory (FFT), which asserted that personality and temperament are “best understood not as characteristic adaptations, but rather as endogenous basic tendencies” (McCrae et al., 2000, p. 174). Meaning, personality and temperament were not a result of adjustment to life's experiences, rather they could be attributed to our innate qualities—otherwise known as nature over nurture. McCrae et al. (2000) speculated that even if identical temperaments were found in infants and later on in adulthood, this would not imply that infant temperament predicts adult personality.

Rothbart, Ahadi, and Evans (2000) disputed the hypothesis proposed by McCrae et al. (2000). Their findings supported personality development and temperaments consistency over time. In their observation of 3 to 13 month olds, Rothbart, Ahadi, and Evans (2000) found longitudinal stability for smiling, laughter, fear, and distress. The researchers also found longitudinal stability for temperament consistency from preschool to middle childhood. Their major findings included correlations between early approach/positive affect and later extraversion, early fear and later, high rates of fear and sadness,

and early proneness to anger and later, high rates of anger/frustration, high-intensity pleasure, impulsivity, and aggression. Overall, they concluded that our early temperamental processes (i.e. approach, fear, anger, etc.) are found to continue throughout one's lifespan. Also, that these early temperamental processes "can be seen as the initial basis for dispositions and orientations toward others and the physical world and for shaping the person's adaptations to that world" (Rothbart, Ahadi, & Evans, 2000, p. 133). In other words, temperament affected a person's adaptation to new environmental situations, not the other way around as proposed by McCrae et al. (2000).

Early Childhood Temperament: Genetics, Environment, and Mother-Child Relationships

The struggle remains to determine whether childhood temperament is a result of genetics, the environment, or the relationship between mother and child (i.e. secure or insecure attachment and differential treatment). According to current research, there is evidence for a combination of these effects. Based on their analysis of results from the Toddler Behavior Assessment Questionnaire and the Children's Behavior Questionnaire, Goldsmith, Buss, and Lemery (1997) concluded that emotional expression is motivated mainly by genetic influences. They found little support for the influence of shared environmental factors, such as maternal personality or attachment styles.

Contrary to these findings, Vaughn et al. (1992) believed that there was a significant correlation between attachment styles and temperament over the lifespan. Bowlby (1982) confirmed this belief with his research supporting early attachment styles and their significant influence on emotional expression and control of affect later in life. Brody, Stoneman, and Burke (1987) also agreed that maternal personality—i.e. maternal

differential behavior—influenced siblings' pro-social behavior. That is, if a mother paid more attention to one child over the other, there was less verbalization and pro-social behavior shared between siblings. Thus, confirming that maternal personality and attachment—i.e. shared environmental factors—seemed to definitely have an impact.

Vaughn et al. (1992) reaffirmed this previous research with correlations found between attachment security scores and temperament scores for negative reactivity. They found the more insecure the attachment, the more negative the reactivity. They also discovered the more difficult the temperament, the more negative the reactivity. However, Vaughn et al. (1992) did not completely dismiss the importance of the interaction between attachment styles and temperament. Furthermore, Burgess, Marshall, Rubin, and Fox (2003) agreed that difficult temperaments and negative parental response increased the chances of development of aggressive behavior. This aggressive behavior created a developmental trajectory that lead to difficulties with adjustment later on. Overall, they believed that whether attachment styles and temperament work together in forming personality, or individually, they both contributed to the control and expression of affect and to the overall development of personality later in life.

Laible (2004) furthered this research on mother-child relationships with her focus on mother-child discourse and its ties to child temperament, attachment security, and socio-emotional competence. The researcher projected that mothers of securely attached children were more likely to openly elaborate on emotional or relational issues in comparison to mothers of insecurely attached children. Also, the mother's interpretation of her child's temperament has an affect on the style and content of discourse. These

factors were believed to greatly impact the socio-emotional competence of these developing children, which would in turn likely affect one's personality development.

The research of Stams, Juffer, & van IJzendoorn (2002) placed a great strain on the genetic view of temperament with their study on adopted children. The researchers provided evidence for temperaments that were predicted by relationships between genetically unrelated mothers and children. This dismissed the genetic debate for temperamental traits because the children were not biologically related to their parents. If the relationship between mother and child was positive and secure, the same results occur despite this genetic difference. Findings still confirmed that secure attachments predicted higher levels of self-worth, more empathetic understanding and response to others, better problem solving, and higher likeliness of establishing and maintaining friendships. These findings concluded that temperament was not strictly biologically based. Nurture played a crucial role in developing a child's temperament and ability to approach and adjust to new situations throughout the lifespan.

A large portion of research was focused to determining whether or not temperament is consistent over time. The remaining portion of this literature review focused on research associated with the consistency of temperament throughout the lifespan as well as its effects on adjustment to school.

Consistency of Temperament in Infancy and Adjustment to Preschool

Garcia-Coll, Kagan, and Reznick (1986) studied the biological signs of temperament in early childhood based on fluctuations in heart rate. The researchers determined that high and stable heart rates were predictors of children who appear to be

shy, fearful, and introverted—otherwise, termed “behaviorally inhibited” (Kagan, 1989, p. 668). Those children with more sociable approaches to novelty were termed “behaviorally uninhibited” (Kagan, 1989, p. 668). Furthermore, Kagan (1989) discovered a “significant preservation of inhibited and uninhibited behavioral styles from the first evaluations at 21 months through 7 ½ years of age” (p. 669). Fox (1989) furthered the research of Kagan and colleagues with his study of emotional reactivity during the first year of life. Fox (1989) determined that children with higher heart rates, or vagal tones, were “more reactive to positive and negative events at 5 months and more sociable and approachable at 14 months” (p. 364). Similarly, Rothbart (1986) found stability of positive reactivity across a period from 3 months to 12 months in infants. These findings imply a consistency between temperamental types found in early assessments and a continuity of these types throughout infancy. The researchers also supported the importance of temperamental continuities on the social development of individuals (Rothbart, 1986).

Besides speculation from a biological perspective, many researchers have taken on the challenge of determining other characteristics that are correlated with temperament, and the affects they have on performance and adjustment to preschool. Rubin, Burgess, Dwyer, and Hastings (2003) identified that a combination of “dysregulated (negative) temperament, early conflict initiations, and aggressive behavior” was a predictor of poor adjustment (p. 174). The researchers also concluded that aggression seen in toddlers was also a consistent predictor of aggressive preschoolers. Nelson, Young, and Obrzut (1998) also identified internalizing and externalizing behaviors, such as withdrawal or aggression, as products of temperaments that lead to

learning and adjustment problems. The researchers claimed that these “early biologically determined behaviors” (i.e. temperament) can be used in the prediction of adjustment problems (p. 5). Palisin (1986) also agreed with the argument that temperament affected how a child interacts with his or her environment. Therefore, the researcher supported that a child’s emotionality contributed drastically to intellectual achievement. According to her research, temperament—specifically approach/withdrawal tendencies—were correlated to higher scores on intelligence tests. This finding confirmed that children who are more at ease in new situations performed better in testing situations. The implications of this finding addressed children with easier temperaments—i.e. those with the ability to soothe, control their behavior, and have persistent attention spans—and their ability to perform better academically and adjust more easily to stressful situation.

Klein (1980) put these notions to the test with her study on predicting adjustment from early childhood temperament in a group-care setting. The primary caregiver assessed temperament of their child with Thomas and Chess’ Questionnaire, and adjustment was measured by means of Behar and Springfield’s scale. The researcher determined that high activity levels, such as high motor activity, predicted difficulties with adjustment. On the other hand, high persistence was found to predict successful adjustment to the group-care setting. A final important factor related to this study was the discovery of stability of results over time. Assessments taken before enrollment, after the initial entrance, and three months into the program maintained consistent results of temperamental effects on adjustment. These findings indicated that not only does temperament play a crucial role in a child’s ability to adjust to a new environment, such as school, but that their ability or inability to adjust is consistent over time.

In a follow-up study, Klein and Ballantine (1987) expanded the above research with the “goodness-of-fit model” (Thomas & Chess, 1977) in relation to temperament and adjustment in British schools. The goodness-of-fit model states, “if the features, demands, and values [of a new setting] are compatible with characteristics the characteristics of an individual child, then that child is perceived as well adjusted” (Lerner & Lerner, 1983, p. 586). The preschool teachers assessed adjustment of preschool children on three adjustment scales: peer relationships, program adjustment, and adult interactions. When tested on eight temperamental types—Activity, Mood, Persistence, Distractibility, Approach/Withdrawal, Adaptability, Intensity, and Threshold—seven out of the eight dimensions were found to correlate with the adjustment rankings. In accordance with the research of Rubin et al. (2003), Nelson, Young, and Obrzut (1998), and Palisin (1986), Klein and Ballantine (1987) concluded that children who were better adjusted were more likely to have higher Positive Mood, Persistence, Approach, and Adaptability, and were lower in Activity, Distractibility, and Intensity. In other words, children who were flexible, low key/easy tempered, and task oriented were more likely to adjust easily to new situations compared to their inflexible, difficult tempered, easily distracted counterparts. Similarly, Cooney and Holmes (1998) confirmed that easy tempered children adapt better, have higher rates of academic achievement, greater overall intelligence, and mild declines in adaptive behavior. Conversely, children with difficult temperaments were found to have poor adaptability, lower rates of academic achievement, and declines in intelligence and adaptive behavior.

Consistency of Temperament through Middle Childhood and Adjustment

Researchers have begun to test the consistency of temperament and its residual effects on adjustment during middle childhood. Durbin, Hayden, Klein, and Olino (2007) hypothesized that they would find stability for temperamental traits in children when tested over the span of ages 3 to 7. Based on maternal reports, temperamental traits—i.e. smiling/laughter, shyness, sadness, anger, fear, and activity level—were recorded. The researchers were able to determine that all temperamental emotionality traits were stable from ages 3 to 7. The highest levels of stability were found in the aspects of Engagement, Sociability, Activity Level, Sadness, and Anger. Durbin et al. (2007) verified that there is a stability of temperament throughout middle childhood. Furthermore, Novosad and Thoman (1999) determined that the stability of temperamental traits found in their study of children aged 4 to 11 was significantly reliable over time. Specifically, these researchers were able to conclude that traits seen in early childhood are stable through middle childhood, and are keen predictors of personality across age levels.

Referring back to Stams, Juffer, and van IJzendoorn (2002), infant temperament was predictive of adjustment in middle childhood. The researchers hypothesized that early difficult temperaments were associated with lower social and cognitive development and were more prone to internalizing or externalizing behaviors. These characteristics, along with disorganized attachment between parent and child, were believed to predict poor adjustment in middle childhood. Stams, Juffer, and van IJzendoorn (2002) determined “maternal sensitive responsiveness in early and middle childhood, as well as infant attachment security, attachment disorganization, and

Specifically, early difficult temperament predicted lower rates of social and cognitive adjustment in middle childhood, as well as more externalizing and internalizing behaviors. Conversely, easy temperament in infants tended to predict more social and cognitive adjustment in middle childhood.

Following the same approach as Durbin et al. (2007), Pedlow, Sanson, Prior, and Oberklaid (1993) extended their study of temperamental stability to include children between the ages of 4 months to 8 years. The researchers hypothesized that temperament was continuous and stable over time. Their findings concluded that a continuity of Approach, Rhythmicity, Persistence, Irritability, Cooperation-Management, and Inflexibility were consistent over time. A main factor found to be significantly consistent over time was Approach. The researchers supported that Approach assessed an individual's shyness and reaction to new situations. If this reaction is consistent over time, the researchers strongly believed that its effects would be seen in an individual's ability to adapt to new situations throughout middle childhood. Pedlow et al. (1993) found the highest rates of stability to be associated with Irritability and Inflexibility, which are characteristics central to difficult temperaments. Those with difficult temperaments in middle childhood were more likely to have adjustment problems. On the other hand, Persistence was also found to be highly stable throughout middle childhood. Persistence was a trait found to be associated with successful adjustment to new situations. Overall, the preceding research furthered the development of the relationship between temperamental consistency and adjustment to new situations through middle childhood.

Infancy to Adolescence: Temperament Consistency, Mother-Child Relationships, and Adjustment

Thus far, the consistency of temperamental traits has been observed from infancy to early childhood to middle childhood. There is a reasonable amount of evidence on the continuity of these traits through adolescence and adulthood. Roberts and DelVecchio (2000) provided an example of trait consistency in their longitudinal study that followed participants from childhood to middle age. The researchers supported the belief of Shiner (1998) that as children age, temperaments became more distinguished and hierarchically integrated into personality. Based on further analysis of the topic, Roberts and DelVecchio (2000) found high levels of consistency across the lifespan. More specifically, they concluded that “beyond the earliest years of life, trait consistency increases in a step-like function with increases coming in the preschool years, in young adulthood, and then again in middle age” (Roberts & DelVecchio, 2000, p. 17). Moreover, the researchers found that all temperament traits—Approach, Negative Emotionality, Task Persistence, and Adaptability—expressed moderate levels of consistency. In conclusion, consistency of temperament was most apparent when approached from a longitudinal view ranging from early childhood to middle age.

Comparable to temperament seen in earlier stages, Katainen, Räikkönen, and Keltikangas-Järvinen (1998) believed that temperament seen in childhood was a result of parent-child relationships. Also, it was believed that childhood temperament accurately predicted temperament and adjustment in adolescence. Specifically, the researchers hypothesized that the childrearing attitudes of mothers would predict the development of certain temperament types. For example, if the mother portrayed a hostile attitude, the

child would be expected to have high levels of Activity, Negative Emotionality, and low levels of sociability. There has also been support that genetic factors and unique life experiences also accounted for variance in these temperamental types (Ganiban, Saudino, Ulbricht, Neiderhiser, & Reiss, 2008). Furthermore, these temperaments and genetic factors were predicted to remain constant throughout childhood and adolescence (Katainen, Räikkönen, & Keltikangas-Järvinen, 1998; Ganiban, Saudino, Ulbricht, Neiderhiser, & Reiss, 2008). Katainen, Räikkönen, and Keltikangas-Järvinen (1998) proved these hypotheses to be true; maternal childrearing affected development of child temperament from childhood through adolescence. The researchers recognized that high levels of sociability in childhood remained constant throughout adolescence. Specifically, agreeableness and extraversion—significant aspects of sociability—were found to be developmentally stable over the lifespan (Graziano, Jensen-Campbell, and Sullivan-Logan, 1998). Also, negative emotionality was expressed through low levels of sociability and high levels of activity. These factors were consistent with other findings that suggest poor adjustment was predicted by low sociability and high activity (Klein & Ballantine, 1987; Klein 1980).

Lengua (2006) expanded the previous research with her study on how parenting behaviors can influence a child's temperament. The researcher hypothesized that changes in temperament and parenting styles were expected to predict children's internalizing or externalizing behaviors. These types of behaviors were further associated with adjustment problems throughout the lifespan. Results from this study confirmed these hypotheses, thus providing evidence for the effects of negative parenting attitudes and their influence on the development of internalizing or externalizing behaviors in

children. Internalizing and externalizing behaviors were observed at the time of assessment 1 and 2, and were found to be significantly associated with adjustment problems at the time of assessment 3. Two temperamental dimensions had significant results. Irritability was found to increase over time and developed into externalizing behaviors. These externalizing behaviors were characteristic of influencing adjustment negatively. Furthermore, increases seen in effortful control were linked to lower levels of internalizing and externalizing behaviors. Meaning, effortful control was found to predict lower levels of adjustment problems. All temperamental and parenting dimensions were correlated at each of the three assessment times. This further supports the idea of consistency of temperament over time.

The combination of temperament and consistency play a major role in an individual's ability to adjust to new circumstances. Jaffari-Bimmel, Juffer, van IJzendoorn, Bakermans-Kranenburg, and Mooijaart (2006) followed up their 2002 study of consistency in middle childhood with a longitudinal study investigating consistency of temperament from infancy to adolescence. They supported that life's earliest experiences served as significant predictors of an individual's ability to adjust later in life. In their previous study, Stams, Juffer, and van IJzendoorn (2002) concluded that easy temperaments found in early childhood were correlated to more positive social development later in life. Also, the researchers determined that difficult temperaments and life stressors were a prediction of lower levels of adjustment later in life, as well. In accordance with this study, Jaffari-Bimmel et al. (2006) tested maternal sensitivity and infant attachment in relation to adolescent social development. The findings support that more maternal sensitivity and more secure-attachment in middle childhood was a

predictor of less difficult temperament in adolescence. Tubman, Lerner, Lerner, and von Eye (1992) reaffirmed the relationship between easy/difficult temperaments and adjustment from middle adolescence to young adulthood. Their research further confirmed that difficult temperaments were associated with poor psychosocial functioning in early and middle childhood and young adulthood. This lack of psychosocial functioning in difficult temperament individuals predicted lower adjustment rates and difficulty with finding a “good fit within the multiple contexts where they live and interact” (p.572). In conclusion, easier temperaments were linked to social development and better adjustment in adolescence (Jaffari-Bimmel et al, 2006).

West and Newman (2007) explored the cross-cultural effects of temperament on adjustment in adolescent American Indians. They believed that early childhood temperament, specifically behavioral inhibition, was a determining factor for social anxiety observed in adolescence and young adulthood. Their analysis yielded a significant correlation between high levels of behavior inhibition in childhood and extreme sensitivity to external environment, novelty, and emotional arousal in adolescence. These heightened tendencies were presumed to be determinants of traits such as negative emotionality and fearfulness. Which in turn, have been identified as risk factors for internalizing behaviors that lead to adjustment problems (Lengua, 2006).

There has been a large amount of support for the belief that temperament is consistent throughout life and highly correlated to adjustment. However, the question remains as to how these adjustment problems are manifested in later life. Newman, Caspi, Moffit, and Silva (1997) observed the consistency of temperamental styles from age 3 to 21 and the effect they had on adult interpersonal functioning. The researchers

categorized temperamental styles as ‘well adjusted,’ ‘under-controlled,’ reserved,’ ‘confident,’ and ‘inhibited,’ and tested their interpersonal functioning in four social contexts: at home, in romantic relationships, social network, and at work. The findings confirmed that negative temperaments observed at age 3, specifically inhibited and under-controlled, were found to have the lowest scores at age 21 in all four social contexts. These individuals were also more likely to report antisocial behaviors in adulthood and to have reputations for problematic interpersonal behavior as adults. Conversely, well adjusted, reserved, and confident children were found to have normal interpersonal functioning in adulthood. These findings indicated that temperaments observed in early childhood have implications throughout life, especially in the area of adjustment and socialization. Individuals with poor interpersonal functioning had a harder time adjusting to new situations and developing lasting relationships with others.

Adjustment Problems and Transition to First Year of College

The research pertaining to temperament and adjustment to college is limited. However, researchers have made several important connections between temperament, academic achievement, and adjustment to college. Research suggested that students who easily adjusted to high school were also found to have an easier transition into the first year of college. The students who were most likely to acclimate with ease ranked higher on scores for Decision Making, Drive, and Self-Confidence (Cartwright, 1963). In retrospect, the “independent, confident, highly motivated, achievement-oriented students” were most likely to adjust with ease to their new college life (Cartwright, 1963, p. 50). Furthermore, this ease of adjustment to college was consistent with the individuals’ ease

of adjustment to high school. Additionally, easy adjustment in high school has been associated with one's academic achievement in high school (Watley, 1965). These findings, combined with the findings of Palisin (1986) and Cooney and Holmes (1998) regarding easy preschool adjustment and academic achievement, confirmed a consistency of adjustment from infancy to adolescence. Watley (1965) also found a consistency between high school academic achievement and college academic achievement based on ease of adjustment during these transitions. Overall, ease and success of adjustment was linked to positive temperamental factors that remain consistent over the lifespan.

The transition to a new school or environment can be a stressful time for anyone. However, a crucial, mediating factor of these situations is one's temperament and ability to identify these stressors. Temperament was believed to "modify the level of activation in response to a stressor," like the adjustment to college (Sobolewski, Strelau, Zawadzki, 2001, p. 289). Meaning, one's reactivity to life stressors was controlled by one's temperamental traits. Moreover, high Activity levels were significantly linked to negative reactions to stressors (Sobolewski, Strelau, Zawadzki, 2001). This finding presented a link between Activity level and response to stressors—like adjustment to college—and poor adjustment, low sociability, and negative emotionality (Klein, 1980; Katainen, Räikkönen, & Keltikangas-Järvinen, 1998; Klein & Ballantine, 1987). That is, if activity is high, an individual was likely to have poor adjustment, low social success, and negative emotionality. The ability to perceive and describe the effects of these stressors was also crucial to adjustment (Kerr, Johnson, Gans, Krumrine, 2004). Those who were unable to describe how they felt—a disorder referred to as alexithymia—were more likely to have difficulty with adjustment.

How one adjusts to college has many determinants. To begin, personal history plays a major role in the ability to adjust. Students who were given freedom and responsibility, parental guidance and companionship, who were socially active, and had a positive attitude towards self and school were more likely to adjust better to college (McKinney, 1939). Those who received more nurturance from parents scored higher for sociability and personality adjustment (Reuter & Biller, 1973). Those who considered themselves shy were more likely to feel inhibited and awkward compared to their un-shy counterparts (Cheek & Buss, 1981). Shyness was negatively correlated with self-esteem and positively correlated with fearfulness. As previously found, individuals who were prone to having an inhibited temperament were more likely to encounter adjustment problems, resulting in poorer adjustment than those who were uninhibited (Kagan, 1989).

Ross and Hammer (2002) determined that personal identity styles—which are formed from temperamental traits—and parenting styles affected adjustment to the first semester of college and to students' academic success. Specifically, informative identity styles—represented by Conscientiousness, Openness, and Agreeableness—were the greatest predictors of better adjustment and academic success in college (Berzonsky, 1990). Furthermore, authoritative parenting styles—those who were demanding, yet responsive—predicted more positive outcomes academically and socially (Baumrind, 1971). Overall, competence, academic achievement, connection to college community, emotion management, development of autonomy, sociability, and identity were all contributors to a successful transition into college (Chickering, 1969; Ross & Hammer, 2002).

Lidy and Kahn (2006) determined that personality predicted adjustment to the first year of college, especially when combined with perceived social support. Social support was found to be a considerable aspect of adjustment because it facilitated “mobilization of interpersonal resources to help students cope with stress of adjusting to college” (Compas, Wagner, Slavin, & Vannatta, 1986, p. 248). Lidy and Kahn (2006) discovered that “greater emotional stability, greater social boldness, less abstractedness, and less apprehension” predicted better adjustment to college (p. 127). Individuals with these qualities were more likely to perceive and pursue social support. The perceptions of such social support lead one to feel confident and comforted that they were not alone during the transition into the first year of college.

Summary of Literature Review

As evidenced by the review of the literature, temperament plays a large role throughout one’s lifespan. Consistency of temperamental traits has been seen throughout all stages of life. Furthermore, this consistency of temperament was strongly believed to affect one’s adjustment to new situations throughout all of the developmental stages of life. Specifically, temperament was presumed to express its consistency during times of adjustment to school. Researchers have confirmed that individuals with more positive temperamental traits, such as Approach, will adjust better than those with negative temperamental traits, like Withdrawal. A reasonable amount of research has been provided thus proving the connection between temperament and adjustment. However, a small portion of this research has been dedicated solely to childhood temperament and its effects on adjustment to college. The current study focused directly on this issue in hopes

of shedding light on the speculated correlation between temperament and adjustment during the first year of college.

Chapter Three: Research Design

Review of Purpose

The purpose of this study was to determine the effects of temperament throughout the lifespan. Specifically, the researcher wanted to determine if temperaments observed in early childhood were related to later factors involving adjustment to the first year of college. Information will be obtained from a questionnaire that measures for childhood temperament and adjustment to college. This information is beneficial for the development of modified adjustment programs that cater to the individual needs of students entering their new environments. Having knowledge about the effects of temperament on adjustment can serve as a way of making the transition easier for those who find it to be a struggle.

Sample

The sample consisted of thirty undergraduate psychology students from the department of psychology's pool of students at Rowan University. All subjects volunteered to participate in the study. By reading the instructional paragraph and proceeding to fill out the survey, the participants consented to take part in the study. The consent form was separate from the survey in order to ensure anonymity and confidentiality. This study did not involve any costs to the subjects, nor was there any payment made to them. The participants received course credit for their participation, as a requirement for the psychology department. All participants were over eighteen years of age.

Measures

The measure utilized was a questionnaire created specifically for this study (see Appendix). The questionnaire used a five-point Likert scale to measure variables. The context of the survey was a mixture of temperament and adjustment measurements. The Likert scale used a five-point rating scale with 1 being strongly disagree and 5 being strongly agree. The survey consisted of forty-five total questions. The first question was used to determine gender. The first set of nineteen questions referred to the participant's perception of his or her childhood temperament based on reactions to certain situations. The participants were asked to seek parental assistance if possible in answering these questions. The last three questions of the temperament section were intended to determine an overall judgment of the participant's perception of their temperament—i.e. whether they thought they were easy, difficult, or slow-to-warm-up. The second set of nineteen questions referred to adjustment to college. These questions examined the participant's perception of his or her adjustment based on certain scenarios. The final three questions of this section were intended to rate the participant's overall perception of his or her adjustment—i.e. easy, difficult, or slow-to-warm-up adjustment types. The overall survey served as a means of measuring the effects of childhood temperament on adjustment to college.

Design

The study was correlational in its entirety. The variables of the current study were childhood temperament and adjustment to college. Since the participants of this study were anonymous, letters seeking permission were not required. Instead, the

participants were required to take part in their choice of experiments for class credit. The study was set up using a survey generator called SONA Systems. Students logged onto the SONA website and selected from a variety of experiments to participate in for credit. Once the experiment had been selected the students chose a time slot in order to come in for a paper and pencil survey. The students were given a survey with a consent form attached. Before handing in the survey they were asked to tear off the consent form and turn in the survey in two different piles. The survey is completely anonymous and all information is confidential. After each timeslot, the researcher collected all surveys and granted credit to all participants who were present for their assigned times. Once all of the data was collected, statistical analyses were run through SPSS.

Hypothesis

It was hypothesized that temperaments observed in childhood would be found to be consistent over time, thus expressing themselves in adjustment to college. In other words, one's temperament as seen in childhood would likely be the cause for an easy or difficult adjustment to college. The researcher hypothesized:

- I. Children with easy temperaments in childhood would perceive their adjustment to college as easy and comfortable
- II. Children with slow-to-warm-up temperaments would have a "slow-to-warm-up" experience of transitioning to their new life in college
- III. Children with difficult temperaments would have a more difficult time transitioning to college

- IV. Overall, temperament would be found to have consistency over time with effects seen in transition to college

Analysis

With the use of the statistical program SPSS, the data was processed and analyzed. For the first and second hypotheses the data was broken down into two totals and then correlated. The two totals were temperament totals and adjustment totals. These totals were compiled from the first nineteen questions from each section of the survey. The highest total for each section was 95 and the lowest was 19. The researcher utilized SPSS in order to run statistical correlations between these two sets of data. The final three questions from each section were also correlated in order to test for the third hypothesis. Correlational results were then analyzed between the variables of childhood temperament and adjustment to college.

Summary

In Chapter 3, the research design was discussed in detail. The chapter covered an overview of the participants, the variables, the exact procedure, and how the data was analyzed. Responses to the survey from the subject pool either proved or disproved the hypotheses. The results obtained from the researcher's survey provided further analysis of the effects of temperament on adjustment to social situations. If the hypotheses of this thesis are determined to be accurate, a wealth of knowledge will be gained and hopefully applied to real life situations. In other words, by knowing the effects of temperament on adjustment to college, school personnel will be able to adjust the orientation process to

better fit the needs of those who struggle with adjustment due to their temperamental types. The information in this chapter also makes it possible for other researchers to replicate, modify, and improve further research on this topic. The following chapters discussed the data analysis and results of the study.

Chapter Four: Results

Introduction and Restated Hypotheses

The purpose of this study was to complete a thorough investigation of the effects of temperament on adjustment. Specifically, the researcher wanted to determine whether temperaments seen in childhood would remain consistent over time and in turn affect adjustment to college. In theory, the researcher was interested to determine whether there was a correlation between temperaments and how an individual deals with adjustment to new situations. If these assumptions were found to be true, this evidence would support the consistency of temperament throughout the lifespan. The evidence would also be proof of the close correlation between temperament and adjustment.

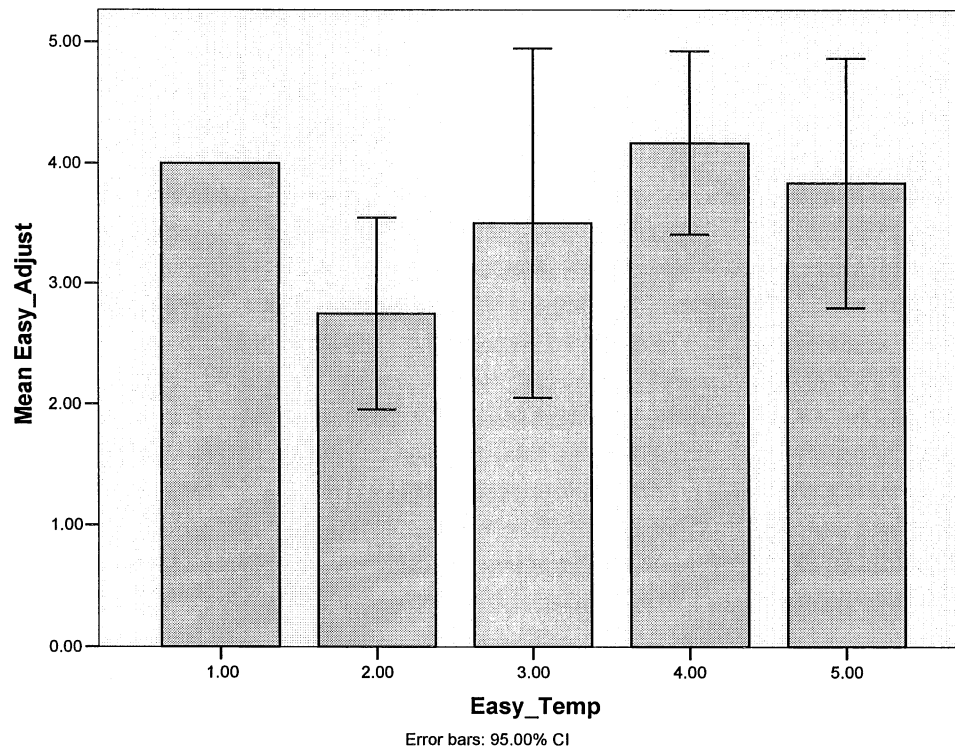
There were four main hypotheses in this study. The first three hypotheses individually tested the consistency of temperament types and adjustment to college. These hypotheses are as follows: Children with easy temperaments in childhood would perceive their adjustment to college as easy and comfortable. Accordingly, it was also hypothesized that children with slow-to-warm-up temperaments would have a “slow-to-warm-up” experience of transitioning to their new life in college. Similarly, it was hypothesized that children with difficult temperaments would have a more difficult time transitioning to college. Finally, an overall hypothesis predicted that temperament would be found to have consistency over time with effects seen in transition to college.

Results

Interestingly, only some of the hypotheses were supported by the statistics. The first hypothesis was not found to be supported by the evidence. Contrastingly, the second and third hypotheses were significantly supported by the statistics. Finally, the last hypothesis also was not found to be significant. Table 4.1 depicts the correlations between the three different temperaments and the prospective effects on adjustment.

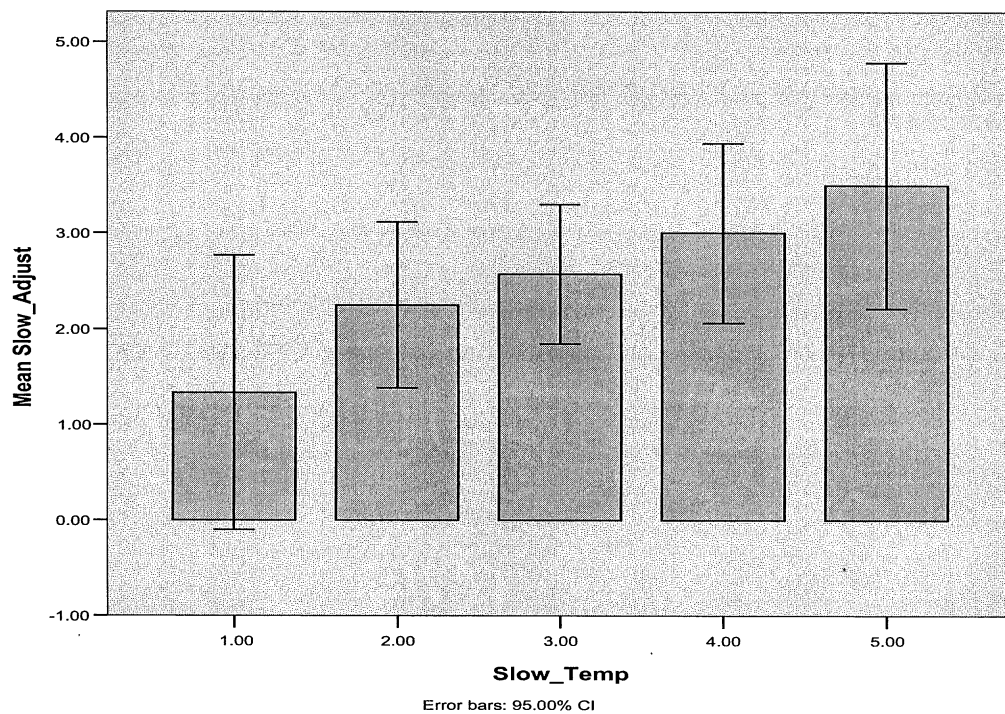
For the first hypothesis, no correlation was found between easy temperament ($M = 3.53$, $SD = 1.17$) and easy adjustment to college ($M = 3.77$, $SD = 1.14$) (see Table 4.1 and Graph 4.1). This correlation was not significant and did not confirm the hypothesis that individuals with easy temperaments had easy adjustments to college.

Graph 4.1 Correlations of Easy Temperament and Easy Adjustment



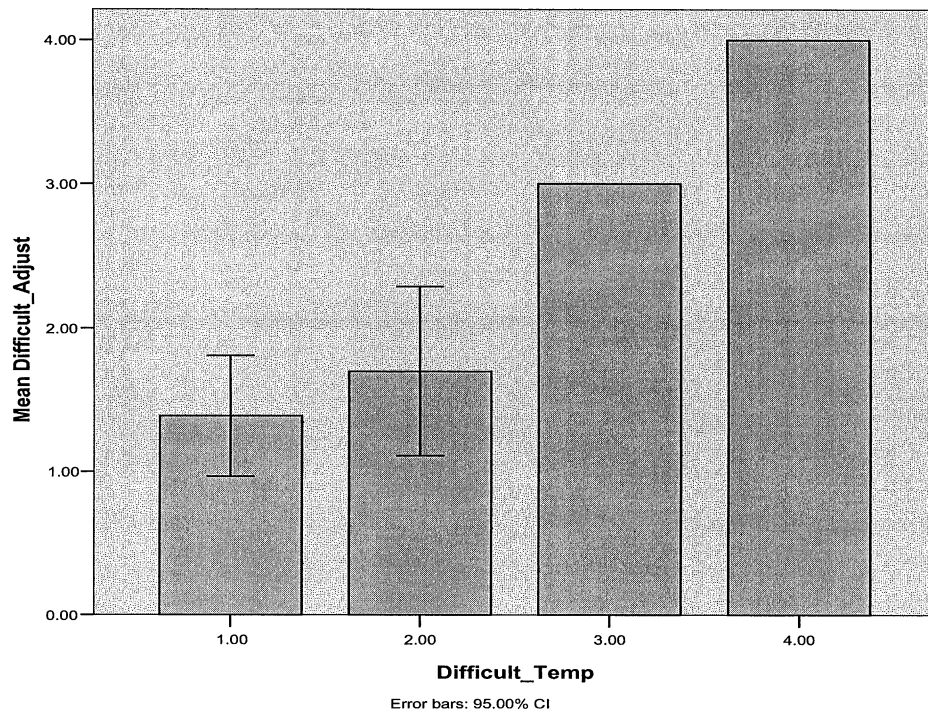
A Pearson correlation was conducted for the second hypothesis as well. A significant correlation was found between slow-to-warm-up temperaments ($M = 3.13$, $SD = 1.31$) and “slow-to-warm-up” adjustments to college ($M = 2.63$, $SD = 1.10$), $r(29) = .564$, $p = .001$ (see Table 4.1 and Graph 4.2). This correlation proposed that individuals with slow-to-warm-up temperaments seemed to have a slower, slightly more difficult adjustment to college.

Graph 4.2 Correlations of Slow-to-Warm-Up Temperament and Slow-to-Warm-Up Adjustment

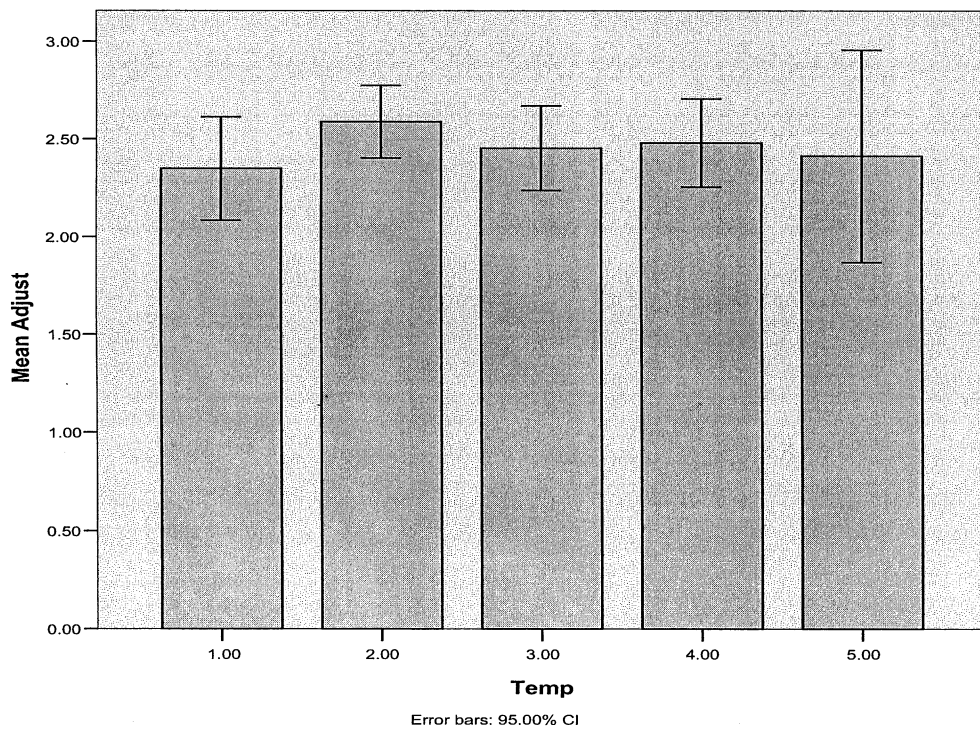


For the third hypothesis, a Pearson correlation of $r(29) = .514$, $p = .004$ was found between difficult temperaments ($M = 1.50$, $SD = .731$) and difficult adjustments to college ($M = 1.63$, $SD = .964$) (see Table 4.1 and Graph 4.3). This correlation supports the hypothesis that difficult temperaments create difficulty in adjusting to college.

Graph 4.3 Correlations of Difficult Temperament and Difficult Adjustment



Graph 4.4 Correlations of Overall Effects of Temperament on Adjustment



For the final hypothesis, no correlation was found for overall effects of temperament ($M = 2.67$, $SD = 1.14$) on adjustment ($M = 2.49$, $SD = 1.29$). These findings are not significant and do not support that temperament has any effects on adjustment to college (see Graph 4.4).

Summary

Only two out of the four hypotheses were found to be significant. In sum, easy temperaments were not found to indicate easy adjustment to college, whereas both slow-to-warm-up and difficult temperaments were found to significantly affect adjustment to college. Specifically, slow-to-warm-up temperaments were found to create a more slow-to-warm-up adjustment experience. Also, individuals with difficult temperaments were likely to have a more difficult time adjusting to college. Unfortunately, the overall effects of temperament on adjustment were not found to be significant, therefore disproving the fourth hypothesis. Although not all of the hypotheses were proven, some very interesting trends were uncovered. These findings were described in full detail in the following chapter.

Chapter Five: Discussion and Implications

Summary of Previous Research and Current Findings

In this study, there were four main hypotheses that aimed at determining the relationship between childhood temperament and adjustment to college. The researcher was interested in determining whether temperament was a consistent trait that affected adjustment throughout the lifetime, specifically in the area of adjustment to college. Previous researchers have had difficulty in determining this consistency because of a lack of cohesiveness in definitions. Many researchers have the tendency of using different names for temperament variables and therefore create disconnect amongst research. However, what has been found from the research supports the consistency of temperament over time, especially for easy temperaments. Rothbart, Ahadi, and Evans (2000) proposed that the approach system is linked to temperaments and consistent over time. The researchers supported that children with easy approach tendencies were likely to have later extraverted personalities, including “positive anticipation and outgoing activity” (p. 129). Similarly, the researchers found that early fearfulness or difficulty with approach predisposed later lower activity and positive anticipation and later, higher rates of fear and sadness.

The first hypothesis of this study focused on the relationships between easy temperaments and one’s ability to adjust to college with ease. Surprisingly, the results did not reveal a significant correlation between the two variables. These findings were contrary to a vast amount of research that supported the consistency of temperament over time. For example, Rothbart (1986) found high rates of stability in positive reactivity

overtime. Meaning, individuals with easy temperaments in infancy were likely to portray easy temperaments into adulthood. Despite findings like these, there has been limited research pertaining to the effects of this consistency specifically on adjustment to college. For these reasons, the current findings may have hinted towards a different trend in the area of temperament and adjustment to college.

In the second and third hypotheses the researcher focused on slow-to-warm-up and difficult temperaments and their possible effects on adjustment to college. The results supported these proposed hypotheses. Both slow-to-warm-up and difficult temperaments were found to have an effect on the individual's adjustment to college. These findings fell more along the lines of what was expected from this study and from what has been found in previous studies. Referring back to the study done by Kerr, Johnson, Gans, and Krumine (2004), alexithymia—deficient emotional processing—was linked to college adjustment. The researchers determined that students who were “emotionally confused or easily overwhelmed” (p. 606) were the most maladjusted during their transition to college. Similarly, Newman, Caspi, Moffitt, and Silva (1997) found that inhibited children had the highest probability of “problematic interpersonal behavior as adults” (p. 212). These characteristics would also serve to create difficulty in adjusting to new people and new situations.

The above findings, along with the current research supported the notion that individual's with more difficult temperaments were likely to have a harder time adjusting to their first year of college. Most students who perceived their childhood temperaments as difficult seemed to be more aware of the fact that their transition to college was harder than what they considered to be “usual.” In essence, students who identified themselves

with easy temperaments may not have anticipated having difficulty in adjusting to college compared to those who identified with difficult temperaments. Therefore, they perceived and expected the experience to be simple and easy. However, those who identified with difficult temperaments may have anticipated a difficult time due to their temperament type, and therefore may have had a harder time transitioning to college. In sum, the way a person perceives his own temperament may in turn affect his experience with adjusting to college.

The final hypothesis dealt with the overall correlation between temperament and adjustment. Subjects rated their temperament as either easy, slow-to warm-up, or difficult and then rated their adjustment to college along the same variables. During statistical analyses, easy temperaments were correlated to easy adjustments, and so on for all other variables. Once again, the results did not significantly support the hypothesis that temperament affected adjustment. Easy temperaments were not found to produce easy transitions to college, nor were difficult or slow-to-warm-up temperaments found to produce difficult transitions to college. Overall, this finding would deny the idea that temperament has any affect on adjustment, and could also possibly deny the consistency of temperament throughout the lifetime.

Although much research has set out to establish the consistency of temperament overtime, McCrae et al. (2000) found evidence similar to the current study's findings. According to their research, "even if identical factors were found in infants and adults, it would not imply that infant temperament was a good predictor of adult personality" (p. 183). The researchers supported a more scientific basis, stating that if our genes and brain functioning are constantly changing over the lifespan, so would our temperaments.

This finding is quite feasible and reasonably supported the idea that we react to obstacles in our environment in very different ways depending on our genes, hormones, maturity, and other factors at that time. These ideas along with the findings of the current study ironically served to disprove the consistency of temperament overtime. They also served to acknowledge the reason why individuals have different experiences with adjustment to new situations. The possibility that some individuals were more genetically and mentally prepared for a transition than others would explain why their perceptions of adjustment were different and not necessarily consistent with their perceived temperaments.

Overall, the majority of the current study's hypotheses were not found to be significant. Although some hypotheses were supported, there was a lack of evidence to prove one side of the argument over the other. Even with the support of previous research, the debate is still up in the air as to whether temperament is consistent overtime, or if it has any affect on adjustment for that matter. Further research on the topic of adjustment to college and temperament is needed in order to confirm or deny the current hypotheses.

Limitations

Several limitations existed within this study that were at possible fault for the lack of significance found. The first set of limitations pertained to sample size and survey errors. Since the study was completed with Rowan University psychology undergraduates, the sample population was not completely randomized, nor was it able to be generalized to the entire population. Overall, for this study to have any significance,

the sample size needed to be larger than thirty participants. If the sample size was larger the likeliness of significant findings may have increased or been more apparent.

Another limitation dealt with the self-created survey used in this study.

Participants may not have understood the direction of the questions or the terms being used. Also, the participants were asked to contact their parents in order to get a better judgment of childhood temperaments. However, none of the participants took the time to contact their parents and therefore took educational guesses about their temperaments. This served as a problem because many of the questions were very specific and probably were very distant memories of the participants, if memories at all. It was actually crucial for the participants to contact their parents for this portion of the survey, but it was highly inconvenient for the participant at the same time. In the future, a different application of this survey should be considered.

Overall, there were many potential factors that were responsible for the discrepancy amongst results. Interested researchers should take the time to learn from these weaknesses and improve on them for future replications of this study.

Conclusions and Implications

The current study set out to fill the gap between temperaments and adjustment by analyzing the transition of first year college students. Although, no significant results were gathered from this study, the questions that this study raised should be further investigated in order to prove or disprove the proposed hypotheses. By determining this relationship, the consistency of temperament over time can be proven along with how it

affects an individual's life experiences. In doing so, we will be able to see how lives are shaped and how individuals are affected by these characteristics.

In knowing this information, colleges can modify their orientation programs to better accommodate individuals and their range of temperaments. These implications have been supported by Lidy and Kahn (2006) who found that individuals who are “emotionally stable, more socially venturesome, and more practical” are more likely to perceive greater amounts of social support (p. 130). Those who have this perception are more likely to have a better adjustment to their first year of college. These findings serve as useful tools for counselors in identifying individuals who are at risk for poor adjustment. Lidy and Kahn (2006) recommend the use of tools like personality tests during orientations in order to screen for these issues. In doing so, counselors will be able to help individuals adjust more comfortably with use of individual counseling, group counseling, and outreach programs.

Although the study lacked statistical significance, the purpose of the study should not be disregarded. Further research is recommended in order to determine the causal relationship between temperament and adjustment. In doing so, many students would be able to benefit from more personalized college transition programs.

REFERENCES

- Baumrind, D. (1971). Current patterns of parental authority. *Developmental Psychology Monographs*, 4(1), 1-103.
- Beder, S. (1997, December). *Addressing the issues of social and academic integration for first year students*. Retrieved from the University of Wollongong, New South Wales, Australia, Faculty of Education, Language, and Community Services web site: <http://ultibase.rmit.edu.au/Articles/dec97/beder1.htm>.
- Berzonsky, M. D. (1990). Self-construction over the lifespan: A process perspective on identity formation. In G. J. Neimeyer & R. A. Neimeyer (Eds.), *Advances in personal construct-psychology* (Vol.1, pp. 155-186). Greenwich, CT: JAI.
- Bowlby, J. (1982). *Attachment and loss* (Vol. 1, rev. ed.). New York: Basic Books.
- Brody, G. H., Stoneman, Z., & Burke, M. (1987). Child temperaments, maternal differential behavior, and sibling relationships. *Developmental Psychology*, 23(3), 354-362.
- Burgess, K. B., Marshall, P. J., Rubin, K. H., & Fox, N. A. (2003). Infant attachment and temperament as predictors of subsequent externalizing problems and cardiac physiology. *Journal of Child Psychology & Psychiatry & Allied Disciplines*, 44(6), 819-831.
- Cartwright, R. D. (1963). Self-conception patterns of college students, and adjustment to college life. *Journal of Counseling Psychology*, 10(1), 47-52.
- Cheek, J. M., & Buss, A. H. (1981). Shyness and sociability. *Journal of Personality and Social Psychology*, 41(2), 330-339.

- Chickering, A. (1969). *Education and Identity*. San Francisco: Jossey-Bass.
- Compas, B. E., Wagner, B. M., Slavin, L. A., & Vannatta, K. (1986). A prospective study of life events, social support, and psychological symptomatology during the transition from high school to college. *American Journal of Community Psychology, 14*, 241-257.
- Cooney, R. R., & Holmes, D. L. (1998). Can toddler temperament characteristics predict later school adaptation? Paper presented at the Biennial Conference on Human Development (15th, Mobile, AL, March 5-7, 1998).
- Durbin, C. E., Hayden, E. P., Klein, D. N., & Olino, T. M. (2007). Stability of laboratory-assessed temperamental emotionality traits from ages 3 to 7. *Emotion, 7*(2), 388-399.
- Fox, N. A. (1989). Psycho-physiological correlates of emotional reactivity during the first year of life. *Developmental Psychology, 25*(3), 364-372.
- Ganiban, J. M., Saudino, K. J., Ulbricht, J., Neiderhiser, J. M., & Reiss, D. (2008). Stability and change in temperament during adolescence. *Journal of Personality and Social Psychology, 95*(1), 222-236.
- Garcia-Coll, C., Kagan, J., & Reznick, J. S. (1984). Behavioral inhibition in young children. *Child Development, 55*, 1005-1019.
- Gibby, R. E., & Zickar, M. J. (2008). A history of the early days of personality testing in American industry: an obsession with adjustment. *History of Psychology, 11*(3), 164-184.
- Goldsmith, H. H., Buss, K. A., & Lemery, K. S. (1997). Toddler and childhood

- temperament: expanded content, stronger genetic evidence, new evidence for the importance of environment. *Developmental Psychology*, 33(6), 891-905.
- Graziano, W. G., Jensen-Campbell, L. A., & Sullivan-Logan, G. M. (1998). Temperament, activity, and expectations for later personality development. *Journal of Personality and Social Psychology*, 74(5), 1266-1277.
- Jaffari-Bimmel, N., Juffer, F., van IJzendoorn, M. H., Bakermans-Kranenburg, M. J., & Mooijaart, A. (2006). Social development from infancy to adolescence: longitudinal and concurrent factors in an adoption sample. *Developmental Psychology*, 42(6), 1143-1153.
- Jull, P., Clark, P., McKinney, G. R., & Trimble, J. E. (2003, December). *Western educational longitudinal study (WELS): Fall 2003 freshman transition survey*. Retrieved from Western Washington University, Bellingham, Office of Institutional Assessment, Research, and Testing web site:
<http://www.wvu.edu/~assess>.
- Kagan, J. (1989). Temperamental contributions to social behavior. *American Psychologist*, 44(4), 668-674.
- Katainen, S., Räikkönen, K., & Keltikangas-Järvinen, L. (1998). Development of temperament: childhood temperament and the mother's childbearing attitudes as predictors of adolescent temperament in a 9-year follow-up study. *Journal of Research on Adolescence*, 8(4), 485-509.
- Kerr, S., Johnson, V. K., Gans, S. E., & Krumrine, J. (2004). Predicting adjustment during the transition to college: alexithymia, perceived stress, and psychological symptoms. *Journal of College Student Development*, 45(6), 593-611.

- Klein, H. A. (1980). Early childhood group care: predicting adjustment from individual temperament. *The Journal of Genetic Psychology, 137*, 125-131.
- Klein, H. A., & Ballantine, J. H. (1987). The relationship of temperament to adjustment in British infant school. *The Journal of Social Psychology, 128*(5), 585-595.
- Laible, D. (2004). Mother-child discourse in two contexts: links with child temperament, attachment security, and socio-emotional competence. *Developmental Psychology, 40*(6), 979-992.
- Lengua, L. J. (2006). Growth in temperament and parenting as predictors of adjustment during children's transition to adolescence. *Developmental Psychology, 42*(5), 819-832.
- Lerner, J., & Lerner, R. (1983). Temperament and adaptation across life: theoretical and empirical issues. In P. B. Baltes & O. G. Brim, Jr. (Eds.), *Lifespan development and behavior* (Vol. 5, pp. 197-231). San Diego, CA: Academic Press.
- Lidy, K. M. & Kahn, J. H. (2006). Personality as a predictor of first-semester adjustment to college: the mediational role of perceived social support. *Journal of College Counseling, 9*, 123-134.
- Mayo, E. (1923). The irrational factor in human behavior: the "night-mind" in industry. *Annals of the American Academy of Political and Social Sciences, 110*, 117-130.
- McCrae, R. R., Costa, P. T., Ostendorf, F., Angleitner, A., Hrebickova, M., Avia, M. D., Sanz, J., Sanchez-Bernardos, M. L., Kusdil, M. E., Woodfield, R., Saunders, P. R., & Smith, P. B. (2000). Nature over nurture: temperament, personality, and life span development. *Journal of Personality and Social Psychology, 78*(1), 173-186.

- McKinney, F. (1939). Personality adjustment of college students related to factors in personal history. *Journal of Applied Psychology, 23*(6), 660-668.
- Nelson, R. B., Young, M., & Obrzut, A. (1998). Prediction of adjustment from preschool temperament. Paper presented at the American Psychological Association Annual Convention (106th, San Francisco, CA, August 14-18, 1998).
- Newman, D. L., Caspi, A., Moffit, T. E., & Silva, P. A. (1997). Antecedents of adult interpersonal functioning: effects of individual differences in age 3 temperament. *Developmental Psychology, 33*(2), 206-217.
- Novosad, C., & Thoman, E. B. (1999). Stability of temperament over the childhood years. *American Journal of Orthopsychiatry, 69*(4), 457-464.
- Palisin, H. (1986). Preschool temperament and performance on achievement tests. *Developmental Psychology, 22*(6), 766-770.
- Pedlow, R., Sanson, A., Prior, M., & Oberklaid, F. (1993). Stability of maternally reported temperament from infancy to 8 years. *Developmental Psychology, 29*(6), 998-1007.
- Roberts, B. W., & DelVecchio, W. F. (2000). The rank-order consistency of personality traits from childhood to old age: a quantitative review of longitudinal studies. *Psychological Bulletin, 126*(1), 3-25.
- Ross, J., & Hammer, N. (2002). College freshman: adjustment and achievement in relation to parenting and identity style. *Journal of Undergraduate Research, 5*, 211-217.
- Rothbart, M. K. (1986). Longitudinal observation of infant temperament. *Developmental Psychology, 22*(3), 356-365.

- Rothbart, M. K., Ahadi, S. A., & Evans, D. E. (2000). Temperament and personality: origins and outcomes. *Journal of Personality and Social Psychology*, 78(1), 122-135.
- Rothbart, M. K., & Derryberry, D. (1981). Development of individual differences in temperament. In M. E. Lamb & A. L. Brown (Eds.), *Advances in Developmental Psychology* (Vol. 1, pp. 37-86). Hillsdale, NJ: Erlbaum.
- Rubin, K. H., Burgess, K. B., Dwyer, K. M., & Hastings, P. (2003). Predicting preschoolers' externalizing behaviors from toddler temperament, conflict, and maternal negativity. *Developmental Psychology*, 39(1), 164-176.
- Rueter, M. W., & Biller, H. B. (1973). Perceived paternal-nurturance-availability and personality adjustment among college males. *Journal of Consulting and Clinical Psychology*, 40(3), 339-342.
- Shaffer, L. F. (1936). *The psychology of adjustment*. Boston: Houghton Mifflin.
- Slee, P. T. (1986). The relation of temperament and other factors to children's kindergarten adjustment. *Child Psychiatry and Human Development*, 17(2), 104-112.
- Shiner, R. L. (1998). How shall we speak of children's personality in middle childhood? A preliminary taxonomy. *Psychological Bulletin*, 124, 308-332.
- Sobolewski, A., Strelau, J. & Zawadzki, B. (2001). The temperamental determinants of stressors as life changes. *European Psychologist*, 6(4), 287-295.
- Stams, G. J., Juffer, F., & van IJzendoorn, M. H. (2002). Maternal sensitivity, infant

attachment, and temperament in early childhood predict adjustment in middle childhood: the case of adopted children and their biologically unrelated parents. *Developmental Psychology*, 38(5), 806-821.

Thomas, A., & Chess, S. (1977). *Temperament and development*. New York: Brunner/Mazel.

Tubman, J. G., Lerner, R. M., Lerner, J. V., & von Eye, A. (1992). Temperament and adjustment in young adulthood: a 15-year longitudinal analysis. *American Orthopsychiatric Association*, 62(4), 564-574.

Vaughn, B. E., Stevenson-Hinde, J., Waters, E., Kotsaftis, A., Lefever, G. B., Shouldice, A., Trudel, M., & Belsky, J. (1992). Attachment security and temperament in infancy and early childhood: some conceptual clarifications. *Developmental Psychology*, 28(3), 463-473.

Watley, D. J. (1965). Personal adjustment and prediction of academic achievement. *Journal of Applied Psychology*, 49(1), 20-223.

West, A. E., & Newman, D. L. (2007). Childhood behavioral inhibition and the experience of social anxiety in American Indian adolescents. *Cultural Diversity and Ethnic Minority Psychology*, 13(3), 197-206.

Appendix

Appendix

Temperament and Adjustment Questionnaire

DEFINITIONS:

Easy= temperamental profile marked by regularity, ease of approach to new stimuli, adaptability to change, mild to moderate mood intensity, and a generally positive mood

Slow-to-warm up= temperamental profile marked by withdrawal from new stimuli and difficulty adapting to change, but whose reactions are of mild intensity and gradually become either neutral or positive with repeated exposures to the new event or person

Difficult= temperamental profile marked by irregular patterns of eating and sleeping, withdrawal from new stimuli, do not adapt easily to change, and react intensely to changes, and a generally negative mood

GENERAL:

Choose one:

Male or Female

CHILDHOOD TEMPERAMENT:

If possible, you may contact your parents or guardians to answer these questions. If not possible, use your best judgment to answer the following questions based on what you know. Circle your rating on the 5-point Likert-type scale; 1 being strongly disagree, 3 being neutral, and 5 being strongly agree.

1.) When told it was time for bed did you react with irritability or anger?

1 2 3 4 5

2.) When approached by unfamiliar people did you remain calm?

1 2 3 4 5

3.) When approached by unfamiliar people did you pull away or avoid them?

1 2 3 4 5

4.) When approached by unfamiliar people did you cling to your parent?

1 2 3 4 5

5.) When having trouble completing tasks did you get easily irritated or become sad?

1 2 3 4 5

6.) When offered choices did you stop and think before deciding?

1 2 3 4 5

7.) When offered choices did you decide quickly?

1 2 3 4 5

8.) When offered choices did you seem slow and unhurried about what to do next?

1 2 3 4 5

9.) When upset did you change to feeling better within a few minutes?

1 2 3 4 5

10.)When up set did you soothe only with difficulty?

1 2 3 4 5

11.)When upset did you stay upset for 10 minutes or longer?

1 2 3 4 5

12.)When approaching unfamiliar children playing, did you watch rather than join?

1 2 3 4 5

13.)When approaching unfamiliar children playing, did you approach slowly?

1 2 3 4 5

14.)When approaching unfamiliar children playing, did you seem uncomfortable?

1 2 3 4 5

15.)In situations where you were meeting new people, did you turn away, become quiet, or feel uncomfortable?

1 2 3 4 5

16.)When being dressed did you squirm or try to get away?

1 2 3 4 5

17.)When being dressed did you stay still?

1 2 3 4 5

18.)When you were told “no,” did you have temper tantrums, become angry or frustrated?

1 2 3 4 5

19.)When tired after a long day of activities, did you easily become frustrated?

1 2 3 4 5

20.)Overall, would you rate your childhood temperament easy?

1 2 3 4 5

21.)Overall, would you rate your childhood temperament as slow-to-warm up?

1 2 3 4 5

22.)Overall, would you rate your childhood temperament as difficult?

1 2 3 4 5

ADJUSTMENT TO COLLEGE:

These questions refer to your first year away at school. Please answer them as honestly as possible. Circle your rating on the 5-point Likert-type scale; 1 being strongly disagree, 3 being neutral, and 5 being strongly agree.

1.) When choosing schools were you hesitant to choose a school that was far from home?

1 2 3 4 5

2.) When choosing schools did you tend to pick schools that were closer to home?

1 2 3 4 5

3.) Did you feel anxious or upset about having to go away to school?

1 2 3 4 5

4.) Were you excited to go away to school and experience the college life?

1 2 3 4 5

5.) When you got to school, did you make friends easily?

1 2 3 4 5

6.) Did you find that you had trouble making lasting friendships at school?

1 2 3 4 5

7.) Were you hesitant to get involved in on campus activities alone?

1 2 3 4 5

8.) Did you feel that you needed a friend by your side in order to give you the confidence to get involved?

1 2 3 4 5

9.) Did you have a large group of friends?

1 2 3 4 5

10.) Did you have a small group of friends?

1 2 3 4 5

11.) When alone, did you have feelings of sadness, emptiness, or loneliness?

1 2 3 4 5

12.) When alone, did you feel at ease and comfortable in your new environment?

1 2 3 4 5

13.) During school functions (dances, pep rallies, etc.) did you feel uncomfortable?

1 2 3 4 5

14.) Did you avoid school functions all together?

1 2 3 4 5

15.) Did you look forward to school functions?

1 2 3 4 5

16.)Did you feel accepted by your peers?

1 2 3 4 5

17.)Did you feel judged by your peers or like you did not fit in?

1 2 3 4 5

18.)Did you call home 5 or more times a week?

1 2 3 4 5

19.)Did you go home more than 3 times a month?

1 2 3 4 5

20.)Overall, did you have an easy transition to college?

1 2 3 4 5

21.)Overall, did you have slow-to-warm up transition to college?

1 2 3 4 5

22.)Overall, did you have a difficult transition to college?

1 2 3 4 5