FACTORS INFLUENCING THE DEVELOPMENT OF
PERFECTIONISM

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Psychological Science Option

by
Kyra L. Davies
Summer 2009
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ABSTRACT

FACTORS INFLUENCING THE DEVELOPMENT OF PERFECTIONISM

by

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Master of Arts in Psychology
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Research on the development of perfectionism is important because many researchers have linked perfectionism and many types of psychopathologies. Therefore, the current study attempts to predict perfectionism from adult attachment, parenting styles and adult temperament. Perfectionism can be defined as a multidimensional trait (e.g., personal standards, parental criticism and expectations, concern over mistakes, organization and doubts about actions) that is characterized as having excessively high personal standards. One hundred and fifty-four participants responded to the Frost Multidimensional Perfectionism Scale, the Experiences in Close Relationships-Revised Questionnaire, the Parental Authority Questionnaire, and the Adult Temperament Questionnaire. Insecure attachment styles, authoritarian parenting style and
extraversion/surgency temperament style were analyzed in all of the regression models. The results indicated that higher scores on the anxious attachment scale were the best predictor for five dimensions of perfectionism and carried the largest beta weights in all five regression models. The findings of the current suggest that individuals who have characteristics of anxious attachment, such as fear of rejection, are likely to develop characteristics of perfectionism.
CHAPTER I

INTRODUCTION

Purpose of the Study

The purpose of the present study is to examine the development of perfectionism using constructs from an integrative transactional model identified by Flett, Hewitt, Oliver and Macdonald (2002) as the framework. The integrative transactional model suggests that child factors (e.g., temperament and attachment style), parental factors (e.g., parenting style) and environmental factors (e.g., culture, peers, teachers and occupation) all play an important role in the development of perfectionism (Flett et al., 2002). The goal of the current study is to explore the child and parent factors of this model by examining the relationship between temperament, attachment style, parenting style, and perfectionism. Exploring the developmental underpinnings of perfectionism is important because perfectionism has been linked to many different types of psychopathologies, including eating disorders, depression, anxiety, obsessive compulsive disorder, and even suicide (Blatt, 1995).

Hypotheses

In this study, it is expected that adult temperament, adult romantic attachment and perceived parenting styles will all be predictive of five dimensions of perfectionism identified by Frost, Marten, Lahart, and Rosenblate (1990). Specifically, insecure adult
attachment styles (i.e., avoidant and anxious) and authoritarian parenting style (both mother and father) will be predictive of the five dimensions of perfectionism. Similarly, extroverted temperament style is also hypothesized to contribute to the development of perfectionism. Each predictor variable will be entered into five regression models, one for each perfectionism characteristic. The results will be discussed in terms of how each of the predictor variables predicted each perfectionism dimension.

There are currently no studies to date that have directly examined adult temperament, parenting style, and adult attachment as predictors of perfectionism. Past research has examined perfectionism and parenting styles as well as perfectionism and adult attachment, but fewer studies have explored the relationship between perfectionism and temperament. By investigating the extent to which these variables may work together to influence outcomes, the current study aims to provide a framework for future research to further understand the developmental origins of perfectionism.

Limitations of the Study

There are a number of limitations and precautions that should be mentioned when interpreting the results of this study. First, this study examines several retrospective constructs. Since both attachment and temperament are seen as fairly stable constructs that individuals adopt as children, however, it is assumed that the responses made by the participants as adults can be attributed to their attachment style and temperament as a child. Second, the Multidimensional Perfectionism Scale (Frost et al., 1990) employed in this study assesses perceived parental criticism and perceived parental expectations. There was no data collected from the parents of the participants, and therefore, the results
addressing these constructs should be identified only as the individual’s perceptions of parenting behaviors. Third, this study utilized primarily self-report questionnaires and therefore can only depend on the answers given by the participants for analysis. Future research should examine the development of perfectionism longitudinally to address issues such as (a) the validity of the retrospective nature of adult recollections of childhood experiences, (b) the inclusion of parental perspectives as well as the child’s perspective, and (c) other methods of assessment (e.g., interviews, observations) to supplement self-report data.
CHAPTER II

LITERATURE REVIEW

Defining and Measuring Perfectionism

Currently no agreed upon definition has been formed for perfectionism (Flett, Hewitt, Oliver, & Macdonald, 2002), but most researchers agree that perfectionism is characterized by setting very high personal standards for oneself and being overly concerned with meeting those high standards (Hamachek, 1978; Pacht, 1984; Frost, Marten, Lahart, & Rosenblate, 1990). Flett and Hewitt define perfectionism as “the striving for flawlessness” (2002, p. 5). Every researcher defines perfectionism differently based on the measure used and the facets each measure encompasses. For the purposes of this study, perfectionism will be defined as a multidimensional personality style in which a person sets extremely high standards for oneself and is overly critical of his/her own behavior (Frost et al., 1990; Hewitt, Flett, Turnbull-Donovan, & Mikail, 1991).

Hamachek (1978) first identified two perfectionism types: neurotic and normal. He described neurotic perfectionists as those individuals who set exceedingly high standards that they cannot meet, and they never feel that they are good enough. Neurotic perfectionists tend to exhibit characteristics that may be seen as maladaptive. Normal perfectionists, in contrast, allow room for error and have a general understanding of what needs to be done to succeed (Hamachek, 1978). Normal perfectionists, therefore, can live their daily lives without their perfectionistic tendencies interrupting or
debilitating them. Since Hamachek’s initial types of perfectionism were identified, many researchers have conceptualized many different types of perfectionism.

Some research explores perfectionism in terms of being either adaptive or maladaptive (Rice, Ashby & Slaney, 1998). *Adaptive perfectionists* can be viewed as having high standards and organization for themselves but not at the expense of self-esteem, which allows them to still feel good about themselves (Rice & Mirzadeh, 2000). One could compare adaptive perfectionists to Hamachek’s normal perfectionists. Adaptive perfectionism has been correlated with efficacy (Frost et al., 1990) and positive affect (Frost, Heimberg, Holt, Mattia, & Neubauer, 1993). *Maladaptive perfectionists*, on the other hand, are never satisfied with themselves; they do not feel good about achieving tasks and feel anxiety about their imperfections (Rice & Mirzadeh, 2000). One could compare maladaptive perfectionists to Hamachek’s neurotic perfectionists.

Additionally, some researchers conceptualize perfectionism as healthy and unhealthy (Stumpf & Parker, 2000), positive and negative perfectionism types (Terry-Short, Owens, Slade, & Dewey, 1995), active and passive perfectionism (Adkins & Parker, 1996), etc. The point that is consistent in these researchers’ conceptualizations is that perfectionism seems to have both positive and negative characteristics.

In the early 1990s, researchers began viewing perfectionism as a multidimensional construct and new measurements were created to reflect this new line of thinking (Frost et al., 1990; Hewitt et al. 1991). Frost et al. (1990) and Hewitt et al. both conducted research examining perfectionism as a multidimensional construct, but both use a different theoretical framework to define their dimensions or facets of perfectionism.
Frost et al. (1990) created the Multidimensional Perfectionism Scale (MPS) which includes six factors of perfectionism: concern over mistakes, high personal standards, parental criticism and expectations, doubts about actions, and organization. The Concern Over Mistakes subscale analyzes negative reactions to mistakes and the feelings of failure due to the mistakes. The Personal Standards subscale measures the extent of standards set for oneself. The Parental Expectations and Parental Criticism subscales measure the perceived perfectionistic expectations a parent portrays on their child and criticism associated with not performing perfectly. The Doubts About Actions subscale measures how good a person feels about the decisions they make and the doubts they may have about finishing a task (Frost et al., 1990). The present study will analyze results from five of these subscales.

Hewitt et al. created a questionnaire which they also named the Multidimensional Perfectionism Scale (HMPS). They identified three different types of perfectionism: self-oriented, other-oriented and socially prescribed. Self-oriented perfectionism can be conceptualized as setting high standards for oneself and believing that it is important to be perfect. Other-oriented perfectionism measures the degree to which the participant expects others to be perfect. Socially prescribed perfectionism can be operationalized as pressure from family and the environment resulting in tendencies of perfectionism (Hewitt et al.). It is important to note that these three constructs of perfectionism have been repeatedly referred to as only correlates or sources of perfectionism, not actual dimensions of perfectionism (Rice, Lopez, & Vergara, 2005).

Frost et al. (1993) conducted a factor analysis to find the relationship between his own and Hewitt and Flett’s Multidimensional Perfectionism Scales. The results
indicated that two factors can be determined: *Maladaptive Evaluative Concerns* and *Positive Achievement Striving* (Frost et al., 1993). Maladaptive Evaluative Concerns was comprised of Frost et al.’s (1990) Concern Over Mistakes, Doubts About Actions, Parental Criticism, and Parental Expectations subscales and Self-Oriented Perfectionism, as well as Other Oriented Perfectionism from the HMPS. Positive achievement striving was comprised of order and organization as well as having high personal standards from the Frost MSP and the Socially Prescribed Perfectionism scale from the HMPS. By creating two overall factors for both scales, it allowed researchers to use either Multidimensional Perfectionism Scale when doing research and compare it to research that may not have been conducted using the same perfectionism scale. The current study uses the Frost Multidimensional Perfectionism Scale because, as past research has pointed out, Hewitt and Flett’s MPS subscales measure factors influencing the development of perfectionism, not actual dimensions of perfectionism. It is believed that at least three subscales on the Frost et al. MPS measure actual dimensions of perfectionism (concern over mistakes, doubts about actions and personal standards).

Another view of multidimensional perfectionism comes from Slaney, Rice, Mobley, Trippi, and Ashby (2001). Slaney and his colleagues measure perfectionism in terms of three factors: *standards, discrepancy, and order*. The standards subscale measures high personal standards and performance expectations. Discrepancy measures “the perception that one consistently fails to meet the high standards that one has set for oneself” (Slaney et al., 2001, p. 69). Finally, order measures preferences for organization and order in daily life.
One more important point to note about the current measures of perfectionism is that order and organization are not typically considered in determining overall perfectionism (either maladaptive or adaptive). These factors are included in the measures strictly because most people believe organization and order to be characteristics of perfectionists (Frost et al., 1990; Hawkins, Watt, & Sinclair, 2006). Therefore, the present study does not examine organization as a factor that would contribute to the development of perfectionism.

Perfectionism and Psychopathology

As many as two-thirds of college students identify themselves as perfectionists (Grzegorek, Slaney, Franze, & Rice, 2004). Much of the past research on perfectionism has been dedicated to examining the relationship between maladaptive perfectionism and psychopathology. Research has consistently found that maladaptive tendencies of perfectionism are correlated with psychopathology (DiBartolo, Yen, & Frost, 2008) and adaptive characteristics of perfectionism are not correlated with psychopathology. Maladaptive perfectionism characteristics have been correlated with eating disorders (Hewitt et al.), suicide (Adkins & Parker, 1996), depression and anxiety (Hewitt & Flett, 1993), and obsessive compulsive disorder (Blatt, 1995). It is apparent that striving too high, being overly critical, having doubts about actions and perceived parental expectation and criticism can become associated with psychological problems at some point.

DiBartolo et al. (2008) studied the dimensions of perfectionism and their relationship to mental health. Using the two hierarchical factors mentioned above
(maladaptive evaluative concerns and positive achievement striving) the results were consistent with past research: The Maladaptive Evaluative Concerns scale was more closely related to psychopathology than the Positive Achievement Striving scale. In addition to this general finding, DiBartolo et al. also found that high standards alone did not relate to risk of psychopathology and should not be thought of as a prime factor in psychological distress. This finding suggests that although having high personal standards is an essential characteristic of perfectionism, it may not be the most important aspect of perfectionism, especially when studying the maladaptive effects of perfectionism.

Individual factors of perfectionism have been examined in relation to psychopathology as well. For instance, Frost et al.’s (1990) MPS subscales Concern Over Mistakes and Doubts About Actions have been associated with maladaptive perfectionism and psychopathology (Frost et al., 1990; Kawamura, Frost, & Harmatz, 2002). Perfectionism’s link to psychopathology enhances the importance of research on the development of perfectionism. If the developmental pathways can be identified consistently, intervention strategies may be able to incorporate more useful information about perfectionism (especially maladaptive perfectionism) into the treatment plan.

Parenting Styles

Baumrind first identified four different parenting styles that were based on varying degrees of parental responsiveness toward children and the amount of parental demandingness (Baumrind, 1971). The four types of parenting styles identified were authoritarian (demanding and unresponsive), authoritative (demanding and responsive),
permissive indulgent (undemanding and responsive) and neglectful (undemanding and unresponsive) (Baumrind, 1971). These styles have been consistently associated with certain child outcomes.

Authoritative parents find a balance between consistent discipline and warmth (Flett, Hewitt, & Singer, 1995). For example, children are given the reasons for punishment and still feel as though their parents love them. This style of parenting is the most adaptive for raising children. Authoritative parenting has been associated with high self esteem (Baumrind, 1983), academic achievement, and autonomy (Steinberg, Elmen, & Mounts, 1989). Authoritative parenting style is the most adaptive because parents are fair and reasonable when exhibiting control and they make demands on their children that are reasonable for the ages of the children. Therefore, parents are not setting their children up for failure and allow the growth of high self esteem.

Authoritarian parenting is a parenting style that is overly controlling and harsh. Children who have grown up with authoritarian parents exhibit more negative self-concept, lower intelligence and poorer social development (Clark-Stewart & Apfel, 1979, as cited in Flett et al., 1995). An authoritarian parent may often offer no reasoning to the decisions and demands they make (Buri, 1991). Baumrind (1971) found that children brought up with authoritarian parents are typically withdrawn and anxious. Baumrind also found that children reacted to their peers with hostility when frustrated (Baumrind, 1971).

Permissive parents are nurturing but provide little control over the children leaving the children to make many decisions by themselves. Baumrind (1971) found that children brought up with permissive parents were typically immature, rebellious and very
demanding of adult’s attention. Past research has found that children who have authoritarian parents and permissive parents typically have internalizing and externalizing problems (Brody & Shaffer, 1982).

Uninvolved/Neglectful parenting style is less researched probably because neglectful parents may not be the type of parents to enroll in research studies. However, the research that has been conducted on neglectful parenting style show that these parents only interact with their children minimally which effects many aspects of child development including attachment, emotional skills, social skills and cognition (Cummings & Davies, 1994).

Perfectionism and Parenting Styles

It is a generally agreed upon notion that the development of perfectionism can be somewhat attributed to interactions with parents (Barrow & Moore, 1983; Pacht, 1984). Parental interactions with children lay a foundation for future interactions which teach children how to respond and what to expect. Perfectionists may grow up in an environment where they are criticized by their parents for being less than perfect and therefore learn that outcomes that are less than perfect are not acceptable (Pacht, 1984). For example, Frost et al. (1991) found that daughters’ perfectionistic tendencies are correlated with mothers’ perfectionistic tendencies but not fathers’. It is not clear why perfectionism in fathers was not correlated with perfectionism in daughters, but Frost et al. (1991) speculated that the father may not be present as much as the mother and/or the father may not be as close to the daughter as the mother. Frost et al. (1991) also concluded that daughters who were more perfectionistic reported having harsher mothers.
Many research studies have linked authoritarian parenting style to perfectionism among children (Frost et al., 1991; Flett et al., 1995; Kawamura et al., 2002). It seems plausible that children of authoritarian parents would exhibit more perfectionistic characteristics due to the overcontrolling nature of their parents. It could be that children may internalize their parent’s criticism and later develop harsh self-criticism. Moreover, it is possible that perfectionistic people perceive their parents to be more critical than they actually are (Kawamura et al.).

Most research on parenting styles and perfectionism concludes that perfectionism is associated with children perceiving their parents as overly critical (Frost et al., 1991). Robin, Koepke, and Moye (1990) found that parents who wanted their children to be flawless also were more likely to have an authoritarian parenting style. Due to the wealth of well-established literature on parenting styles and perfectionism, it is expected that similar results will be found in the current study. The present study examines only scores obtained from the authoritarian subscale of the Parental Authority Questionnaire (PAQ) (Buri, 1991) for both mothers and fathers.

Attachment

Attachment theory describes a stable bond between two people and how these bonds affect development (Bowlby, 1988). It is important to note that attachment is not specific parenting behaviors but a perspective on parenting (Cummings & Cummings, 2002). Most research conducted on attachment is in regard to the security of the attachment relationship. Attachment bonds require four essential features: proximity maintenance, separation distress, safe haven, and secure base. As infants, attachment is
formed based on the reliability of the attachment figure providing a safe environment in times of distress as well. Proximity maintenance is a feature that describes how safe the infant feels and how far away from the attachment figure the infant is willing to explore. The attachment bond that an infant forms is very important because it is the first relationship a person forms. Therefore, the first attachment bond will teach an infant what to expect for future relationships and interactions.

Bowlby described separation anxiety as occurring due to threats of parents not being available in times of need or parental rejection (Bretherton, 1992). Separation distress is typically measured by the Strange Situation which was first studied by Ainsworth and Wittig, 1969, as cited in Bretherton, 1992). In the Strange Situation, infants are observed with the primary caregiver and a stranger in a laboratory room, followed by only a stranger in the room, then alone in the room and finally the return of the primary caregiver to the room. The reunion of the attachment figure and the infant has found specific trends (Ainsworth & Bell, 1970). Infants that had formed secure attachments used the attachment figure as a secure base and this allowed the infant to explore the surroundings. Infants that had formed an insecure avoidant attachment style did not use the mother as a secure base. Infants that had formed an insecure anxious attachment style were not easily comforted upon return of the attachment figure but they did become very clingy which compromised exploratory behavior. Finally, infants that have formed a disorganized insecure attachment do not display any mechanisms of dealing with distress (Ainsworth, Blehar, Waters, & Wall, 1978).

Cognitively, the attachment system is useful because individuals form an internal working model for themselves (their own value) and a working model of others
Past research examining attachment bonds has distinguished between four different attachment bond types: secure, insecure avoidant, insecure anxious and insecure disorganized attachment style. Consistently research has shown that people with a secure attachment have positive internal working models of themselves as well as others (Bowlby, 1973). A secure attachment emerges in a nurturing environment in which the person feels safe. The person feels comfortable in the environment and is able to approach new experiences without fear (Rice & Mirzadeh, 2000).

Insecure attachment styles develop in an environment in which a person does not feel nurtured by the attachment figure and feels unable to predict events and reactions. Therefore, children who adopt an insecure relationship may be more likely to develop perfectionistic tendencies. Children that feel unsafe due to inconsistent parenting are more likely to try and gain acceptance from their parents so that they can eventually feel safe. A considerable amount of research correlates parental depression and the development of insecure attachment styles (Cummings & Davies, 1994).

People that develop an insecure avoidant attachment style have a positive internal working model of themselves but a negative working model of others therefore, may view attachment figure as undependable and may not use the attachment figure as a secure base (Cassidy, 1988). People who develop an avoidant attachment style have a poor working model of others in relationships and tend to avoid intimate relationships (Bartholomew & Horowitz, 1991). Insecure avoidant attachment can be characterized as having fear of closeness and/or dependence (Wei, Heppner, Russell, & Young, 2006); that is, these people do not feel comfortable depending on others. People who develop an
avoidant attachment style typically do not report enjoying physical contact or cuddling (Fraley, Davis, & Shaver, 1998) and tend to emphasize their autonomy (Hazan & Shaver, 1987). An avoidant attachment style is thought to develop as a result of parental rejection or intrusiveness (Crowell & Treboux, 1995). Adults that develop an avoidant attachment style report having cold and rejecting mothers (Hazan & Shaver, 1987). Therefore, children with avoidant attachment patterns may have problems developing trust.

Individuals that form an insecure anxious attachment style have a negative internal working memory for the self but a positive internal working memory for others (Bartholomew & Horowitz, 1991). Individuals who form an insecure anxious attachment may be characterized as having a fear of rejection or abandonment (Wei et al., 2006). Attachment theory suggests that people that develop an anxious attachment style may overreact to their negative feelings to get attention and support from others (Wei et al.). Anxious attachment style is thought to develop due to parents being inconsistently available and therefore, these children may develop clinginess to their parents because they never know if their parents are going to be available, but they want to be close to them in case they are going to be responsive (Wearden, Peters, Berry, Barrowclough, & Liversidge, 2008). Wearden et al. (2008) found that anxious attachment was correlated to inconsistent parenting and can lead to children doubting their own worth.

In general, people that develop an anxious attachment style seek closeness to their partner but do not find the closeness to be satisfying (Ainsworth, et al., 1978; Hazen & Shaver, 1987; Feeney & Noller, 1991), and they report more loneliness than people with secure attachment and insecure avoidant attachment styles (Hazan & Shaver, 1987).
These individuals also tend to become very upset by relationship breakups compared to the other attachment styles (Feeney & Noller, 1992).

Disorganized attachment style may develop due to neglectful and abusive parenting (Main & Solomon, 1990) and therefore, is less likely to be researched. In general, research has found that individuals that develop an insecure disorganized attachment style have poor working internal models of themselves and of others (Main & Solomon, 1990).

Adult Attachment

Bowlby described adult attachment relationships as pair bonds. A pair bond is a bond between sexual partners who together, derive and provide security (Hazen & Zeifman (1999) in which both partners benefit from the relationship. Adult attachment research is a relatively new interest in the attachment literature but the literature on this subject is growing very quickly. For this reason, many measures created to study adult attachment styles have not yet been well validated and use different theoretical frameworks to measure adult attachment (Crowell & Treboux, 1995).

There are three behavior systems that are involved in adult attachment relationships: attachment, caregiving, and sexual systems (Ainsworth, 1989). The attachment system is a biological system that is activated in times of threat and has an evolutionary purpose because when it is activated, the primary instinct is to go toward the attachment figure for protection (Cassidy, 2000). The attachment system regulates proximity and contact with the attachment figure (Cassidy, 2000). The caregiving system organizes behaviors that are involved in the care of others (Cassidy, 2000). The sexual
system is most important in the beginning of the relationship and is thought to keep two
people together long enough to form an attachment bond (Hazen & Zeifman, 1999).

Although attachment styles are fairly stable throughout life, changes in
adulthood may alter the specific attachment orientation of an individual (Bowlby, 1988).
This is important to note because the present study assumes that the particular attachment
style measured in adulthood will be consistent with the attachment style the participant
had as a child. Bowlby (1988) suggested that attachment patterns are difficult to change
and they are stable over the years because these bonds are usually continuous, that is,
there is never a time when a person is not attached to someone. Therefore, according to
attachment theory adult attachment style is likely reflective of the attachment style one
had with parents as a child.

Perfectionism and Adult Attachment

Hamachek (1978) suggests that perfectionism develops as a product of
children’s acceptance from a parent who sets very high standards for the child and is
never satisfied with the child’s efforts. The children then internalize their parents’
disappointment and continue to strive for perfectionism to get their parents’ approval.

Past research has examined the relationship between perfectionism and
attachment bonds in children but only a few studies have examined adult attachment and
perfectionism. Andersson and Perris (2000) found that maladaptive perfectionistic
tendencies were related to insecure attachment styles. Both adult anxious attachment and
avoidant attachment styles are forms of insecure attachment styles. Rice and Mirzadeh
(2000) suggested that insecurely attached children may describe themselves as perfect to
hide their feelings of unworthiness. Cassidy (1994) suggests that children that are insecurely attached may suppress their feelings around their parents to keep a connection with their parents.

Parker (1997) found that in general, perfectionists who displayed more maladaptive traits reported having an insecure attachment to their parents, whereas perfectionists who displayed more adaptive traits reported having a secure attachment to their parents. Rice and Mirzadeh, (2000) also found that adaptive perfectionists reported a more secure attachment to their parents. Therefore, it can be expected that those exhibiting a secure attachment with a romantic partner or their parents are more likely to exhibit adaptive perfectionistic characteristics (e.g., high personal standards). In contrast, those with insecure attachment bonds (either avoidant or anxious) are more likely to exhibit maladaptive characteristics of perfectionism (e.g., excessive concern over mistakes and doubts about actions).

Temperament

Temperament was originally studied and defined as the “how” of behavior by Thomas and Chess (1977) in their New York Longitudinal Studies. They created nine domains of temperament including: activity level, rhythmicity, adaptability, approach/withdrawal, threshold to responsiveness, intensity of reaction, quality of mood, distractibility, and attention span (Thomas & Chess, 1977). A brief description of each is necessary to understand what exactly each construct measures when conducting research. When measuring activity level, researchers look for the amount of motor activity and physical activity during a period of time. Approach and withdrawal measure how a child
reacts to new stimuli. Approach can be identified as a positive reaction to stimuli while withdrawal can be identified as a negative reaction to stimuli in the environment (Thomas & Chess, 1977). Adaptability measures how well a child adapts to new situations. Some researchers may include sessions in which a child is left alone in a room, either with or without a stranger. The purpose of this is to see how the child adapts when they are around unknown people and places. Mood measures the amount of positive and negative responses during a period of time. When measuring mood, a researcher is interested in how the mood changes and what makes the mood change. Threshold measures the amount of stimulation needed to provoke a response in terms of intensity (Thomas & Chess, 1977). For example, if lights are becoming brighter, the researcher is looking for a brightness in which the child acknowledges the lights. Intensity measures the level of activeness present when a child gives a response to stimuli. Distractibility measures how often the child gets distracted from the stimulus. Rhythmicity measures how regular the child is in everyday situations, for example their sleep cycle and hunger. Attention span is how long a child can pursue the same activity and persistence is how long the child attends to one activity when there are other obstacles that get in their way (Thomas & Chess, 1977).

From the New York Longitudinal Studies, Thomas and Chess (1977) formed three different types of children based on the temperament that they had. The “easy child” is a child that has a routine that is easily maintained and enjoys new experiences and maintains a cheerful personality. The “difficult child” reacts opposite of how the “easy child” reacts. The “difficult child” does not enjoy new experiences, is fussy much of the time, and does not have a regular daily routine which is hard on both the child and
the parent. The last type of child identified was the “slow-to-warm-up child.” This type of child is typically inactive and adjusts to new situations slowly. This type of child is seems more likely to be in a negative mood (Thomas & Chess, 1977).

These nine temperament domains have recently been refined and extended by Gartstein and Rothbart (2003). The refined temperament constructs include three broad factors: surgency/extraversion, regulation/orienting and negative affectivity. Surgency/extraversion includes the temperament constructs approach, vocal reactivity, high intensity pleasure, smiling/laughter, activity level, and perceptual sensitivity (Gartstein & Rothbart, 2003). The regulation/orienting domain includes the constructs low intensity pleasure, cuddliness, duration of orienting, and soothability (Gartstein & Rothbart, 2003). Finally, the negative affectivity domain contains sadness, distress to limitations, fear, and falling reactivity (Gartstein & Rothbart, 2003). The current study will use Rothbart and Derryberry’s (1981) definition of temperament which includes the biological differences in reactivity and self-regulation (Rothbart & Derryberry, 1981). This definition is used because the temperament questionnaire used in the present study, the Adult Temperament Questionnaire (ATQ) (Rothbart, Ahadi, & Evans, 2000) was created using this theoretical framework. The only scale of the ATQ that will be analyzed is the present study is the extraversion/surgency scale.

Temperament has become a rapidly growing research topic in developmental psychology. Numerous studies correlate psychopathology in children with infant temperament and parental characteristics (Nigg, 2006; Kochanska, 1997). There are four models that connect temperament to psychopathology including: 1) psychopathology and temperament are on the same continuum, 2) some temperament types predispose
individuals to psychopathology, 3) temperament alters the course of the disorder by adaptation, and 4) pathological processes alter an individual’s temperament or personality (Nigg, 2006). None of the above four models have been proven but most researchers who study temperament and psychopathology use one model as their theoretical background to their research. The current study will use the predisposing model. More specifically, the current study uses the framework that certain temperament traits on the extraversion/surgency subscale may predispose an individual to certain perfectionism traits which could then potentially lead to psychopathology.

As with parenting style, the perception of parent’s of their children will effect how the child develops. For example, Pesonen (2003) found that fathers perceived their infants as more fearful than mothers did. If fathers perceive children as more fearful, he will most likely protect them from what he thinks they may fear. While the father thinks he is protecting his children, he is actually making them fearful just because he believes they are fearful (Pesonen, 2003). This is important because in terms of perfectionism, because children that are highly fearful will likely avoid situations that may evoke fear and they may even try to control the environment so fear will not have to be felt.

Adult Temperament

Measuring temperament in adults is rarer because most researchers look at adult characteristics as personality traits, not temperament constructs. Rothbart et al. (2000) suggested that temperament is central to understanding personality. Personality seems to include temperament but also much more than just temperament. It has been suggested that personality includes morals and values while temperament includes
attentional control and activational control (Rothbart & Bates, 1998). Some temperament constructs can be compared systematically to personality traits (Gartstein & Rothbart, 2003). For instance, Gartstein and Rothbart (2003) have looked at neuroticism when measuring negative affect in adults. Since adult temperament is not widely researched, the current research will add to the literature on adult temperament, specifically the extraversion/surgency.

Perfectionism and Temperament

Very few studies have examined the relationship between temperament factors and perfectionism, and therefore the predictions made in the current study are exploratory. Adult temperament is viewed as a subdomain of personality that includes attentional processes, but not cognitive processes (Evans & Rothbart, 2007). Most researchers also view temperament in terms of individual differences in biological predisposition of expressing emotions and regulating emotions (Rothbart & Derryberry, 1981). Temperament is seen as a moderately stable construct across the lifespan and therefore people are likely to maintain similar temperament styles in both childhood and adulthood.

For the purposes of this study, the temperament factor scales identified by Rothbart et al. on the Adult Temperament Questionnaire (ATQ) will be explained and examined. This measure includes four factor scales: negative affect, effortful control, extraversion/surgency, and orienting sensitivity. The negative affect scale includes fear, sadness, discomfort, and frustration. The extraversion/surgency factor scale includes sociability, positive affect, and high intensity pleasure. The effortful control factor scale
includes attentional control, inhibitory control, and activation control. Finally, the
orienting sensitivity factor scale includes neutral perceptual sensitivity, affective
perceptual sensitivity and associative sensitivity (see Evans & Rothbart, 2007 for a
complete list of definitions).

Theoretically, one could speculate that persons exhibiting high levels of
perfectionistic tendencies would also exhibit high levels of characteristics found on the
extraversion/surgency scale as well as the negative affect scale. To date, only one study
by Kobori, Yamagata, and Kijima (2005) has studied adult temperament and
perfectionism. This study used Cloninger’s Temperament and Character Inventory
(Cloninger, Svrakic, & Przybeck, 1993) which identifies four different types of
temperament constructs: novelty seeking, harm avoidance, reward dependence and
persistence. Perfectionism was studied using Hewitt and Flett’s MPS Self-Oriented and
Socially Prescribed subscales. The results suggested that low novelty seeking and high
persistence were significant predictors of self-oriented perfectionism (Kobori, et al.,
2005). This result can be compared to ATQ constructs as well as the Frost et al. MPS,
which are used in the current study. For instance, novelty seeking may be compared to
high intensity pleasure which includes enjoyment of situations high in novelty.
Theoretically then, based on Kobori et al’s results, scores that are low on high intensity
pleasure may predict certain aspects of perfectionism. Although high intensity pleasure is
only one component of the extraversion/surgency scale, the present study will analyze
this scale as a whole.
Hypotheses

In this study, it is expected that adult temperament, adult romantic attachment and perceived parenting styles will all be predictive of five dimensions of perfectionism identified by Frost et al. (1990). Specifically, characteristics of an insecure adult attachment styles (i.e., avoidant and anxious) and perceived authoritarian parenting style (both mother and father) will be predictive of the five dimensions of perfectionism. Similarly, extroverted temperament style is also hypothesized to contribute to the development of perfectionism. Each predictor variable will be entered into five regression models, one for each perfectionism characteristic. The results will be discussed in terms of how each of the predictor variables predicted each perfectionism dimension.

There are currently no studies to date that have directly examined adult temperament, parenting style, and adult attachment as predictors of perfectionism. Past research has examined perfectionism and parenting styles as well as perfectionism and adult attachment, but fewer studies have explored the relationship between perfectionism and temperament. By investigating the extent to which these variables may work together to influence outcomes, the current study aims to provide a framework for future research to further understand the developmental origins of perfectionism.
CHAPTER III

METHODOLOGY

Procedures

All measures were put onto an online survey website entitled QuestionPro.com. A flyer was posted in the psychology building along with a sign-up sheet for different dates and times to complete the questionnaires. The computer lab in the psychology building was utilized since 24 participants could complete the questionnaires at one time in this location. The students first provided informed consent and then QuestionPro.com prompted the students through a series of questionnaires and ended on the debriefing page.

Sample

Participants were 154 undergraduate students (males 25.3%; females 74.7%) from California State University, Chico from various disciplines (54.5% Psychology majors). Ages of the participants ranged from 18-55 ($M=22.01$, $SD = 5.84$) years old with freshman representing 16.9% of the sample, sophomores representing 17.5% of the sample, juniors representing 38.3% of the sample and seniors representing 27.3% of the sample.

The demographic information collected included a question identifying ethnicity. The ethnicities that were placed as options were taken from the census
collected in the city to ensure options that would represent the community. The sample collected was of mixed ethnicity but predominately Caucasian (76.6%) followed by persons marking the other ethnicity category (9.7%) mixed ethnicity (7.8%), Asian ethnicity (3.2%) and then Pacific Islander and African American together representing less than 5% of the sample.

Participants were also asked their relationship status at the time of completing the questionnaires. The predominant response was “single” (56.5%), followed by “in a relationship” (35.7%), then “married” (3.2%), and finally “divorced” (2.6%). Three participants did not respond to the question regarding their relationship status.

Measures

Questionnaires were used to assess participants’ degree of perfectionism on a number of different dimensions, attachment styles, adult temperament, and their parent’s style of parenting.

Perfectionism

The Multidimensional Perfectionism Scale (MPS) (Frost, Marten, Lahart, & Rosenblate, 1990) is a 35-item measure tapping into six dimensions of perfectionism. These six dimensions create the following six subscales: Concern Over Mistakes (9 items), Personal Standards (7 items), Parental Expectations (5 items), Parental Criticism (4 items), Doubts About Actions (4 items), and Organization (6 items). The Concern Over Mistakes items measure negative reactions to mistakes as well as mistakes being thought of as failures (e.g., “If someone does a task at work/school better than me, then I feel like I failed the whole task”). The Personal Standards subscale measures the extent to
which one sets standards for their self (e.g., “If I do not set the highest standards for myself, I am likely to end up a second-rate person.”). The Parental Expectations and Parental Criticism subscales measure the perceived perfectionistic expectations a parent portrays to their child and criticism associated with not performing perfectly (e.g., “My parents wanted me to be the best at everything” and “As a child I was punished for doing things less than perfectly”). The Doubts About Actions subscale measures how good a person feels about the decisions made and the doubt they have about finishing a task (e.g., “Even when I do something very carefully, I often feel that it is not quite done right”) (Frost et al., 1990). As mentioned above, the organization scale was not utilized in the current study because it has been consistently found not to relate strongly to the other subscales.

Frost created this measure by utilizing resources previously used to measure perfectionism including the Eating Disorders Inventory-Perfectionism Scale (Garner, Olmstead, & Polivy, 1983, as cited in Frost et al., 1990) and the Maudsley Obsessive Compulsive Inventory doubting subscale (Rachman & Hodgson, 1980, as cited in Frost et al., 1990). All items are answered by participants using a five point Likert scale ranging from 1 (strongly disagrees) to 5 (strongly agrees). The MPS has demonstrated good internal consistency and high correlations with other measures of perfectionism (Frost et al., 1990). Each subscale within the MPS have been found reliable. The overall Chronbach’s alpha for the MPS is .91 while the subscales had alpha levels ranging form .78-.92 (Frost, Lahart, & Rosenblate, 1991).
Attachment Styles

The Experiences in Close Relationships-Revised (ECR-R) (Fraley, Waller, & Brennen, 2000) questionnaire was used to measure adult romantic attachment. The ECR-R is a 36 item measure with two subscales (avoidant and anxious) with higher scores indicating higher support of the construct. The items were answered on a 7 point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). An example of a reverse scored item measuring avoidant attachment style is “It’s easy for me to be affectionate with my partner.” An example of an item measuring anxious attachment style is “I often wish that my partner’s feelings for me were as strong as my feelings for him or her.” Internal consistency was demonstrated for both the avoidance and the anxiety subscales with Cronbach’s alphas of .927 and .917, respectively (Fraley et al., 2000).

Adult Temperament

The Adult Temperament Questionnaire Short Form (ATQ) (Rothbart, Ahadi, & Evans, 2000) was utilized to measure various temperament styles. The ATQ measures the four general constructs of effortful control, negative affect, extraversion/surgency, and orienting sensitivity. Each general construct has multiple factors scales. For example, the extraversion construct is comprised of the following factor scales: sociability (e.g., “I usually like to spend my free time with people”), high intensity pleasure (e.g., “I would not enjoy the feeling that comes from yelling as loud as I can”), and positive affect (e.g., “Sometimes minor events cause me to feel intense happiness”). The Extraversion/Surgency subscale will be utilized in the present study.

Each factor scale has good internal consistency reliability with the Negative Affect scale produced a Cronbach’s alpha of .81, the Effortful Control scale produced
an alpha of .78, the Extraversion scale produced an alpha of .75, and the Orienting Sensitivity scale produced an alpha level of .85. Each construct subscale within each factor also demonstrated reliability with alpha’s that ranged from .62-.79. The ATQ has a short form and a long form and interitem reliability was found comparing the two forms. The factors interitem reliability alpha’s ranged from .91-.96 and the construct subscales alpha’s ranged from .85-.96 (Rothbart et al., 2000).

**Parenting Style**

The Parental Authority Questionnaire (PAQ) (Buri, 1991) was utilized to measure perceived parenting style. The PAQ is a 30 item questionnaire with three subscales designed to measure Baumrind’s authoritarian parenting style (e.g., “Even if I did not agree with this parent, he/she believed it was for my own good if he/she forced me to conform to what he/she thought was right”), authoritative parenting style (e.g., “Once family policy had been established, this parent discussed the reasoning behind the policy with me”), and permissive parenting style (e.g., “This parent felt that I should have my way as often as he/she did”). Each parenting style is addressed twice in the questionnaire, once measuring the mother and then measuring the father creating six subscales. Each item is answered using a 5 point Likert rating scale ranging from 1 (strongly disagree) to 5 (strongly agree). The PAQ has demonstrated good content validity, test-retest reliability, and discriminant validity for all six of the scales. Internal consistency reliability has also been demonstrated and produced the following alphas for each subscale: .74 for Mother Authoritative, .85 for Father Authoritative, .82 for Mother Authoritarian, .87 for Father Authoritarian, .75 for Mother Permissive and finally, .74 for Father Permissive (Buri, 1991).
Analytic Strategy

The data was exported from QuestionPro.com into SPSS where all analyses were performed. The current study attempts to predict which factors influence the development of perfectionism. Simultaneous regression was utilized to examine if adult temperament, adult attachment, and parenting style were significant predictors of the five dimensions of perfectionism (doubts about actions, concern over mistakes, personal standards, parental expectations and parental criticism). Organization was not examined in a regression model due to the abundance of research that implies organization is not a key component of perfectionism. Each regression model included scores for anxious and avoidant attachment, mother’s and father’s authoritarian parenting style and extraversion/surgency temperament style.
CHAPTER IV

RESULTS

Interitem Reliability

Interitem reliability of all the MPS subscales were calculated to ensure all scales were found reliable in this study. Cronbach’s alpha for Concern Over Mistakes ($M = 21.43, SD = 7.10$) was .89. The Doubts About Actions subscale ($M = 10.74, SD = 3.55$) and Personal Standards subscale ($M = 24.05, SD = 4.92$) had alpha levels of .78 and .79, respectively. Parental Criticism ($M = 8.80, SD = 3.69$) and Parental Expectations ($M = 14.16, SD = 4.38$) yielded alpha levels of .79 and .81, respectively. The alpha levels, means, and standard deviations are comparable to previous studies (Frost, Marten, Lahart, & Rosenblate, 1990).

The ECR-R Anxious subscale ($M = 62.69, SD = 20.91$) and the Avoidant subscale ($M = 55.89, SD = 19.75$) produced alpha levels of .92 and .97, respectively. The present study has interitem reliabilities as well as means and standard deviations consistent with previous studies (Fairchild & Finney, 2006).

The ATQ has four over arching factors and Cronbach’s alphas were adequate for all of them. The Negative Affect factor ($M = 104.49; SD = 17.46$) yielded an alpha level of .80 while effortful control ($M = 76.46, SD = 12.75$) had an alpha level of .76. The Extraversion/Surgency factor ($M = 75.79, SD = 12.89$) and Orienting Sensitivity factor ($M = 73.41, SD = 11.33$) both obtained alpha levels of .77. The means, standard
deviations and alpha levels found in the present study are comparable to previous studies (Rothbart, Ahadi, & Evans, 2000).

Correlational Findings

All predictor variables were also analyzed to ensure that none of them correlated above .70 to ensure multicollinearity did not exist (see Table 1). Concern Over

Table 1

*Bivariate Correlations Between MPS Subscales and Predictor Variables (N = 145)*

<table>
<thead>
<tr>
<th>Variable</th>
<th>CM</th>
<th>DAA</th>
<th>PS</th>
<th>PC</th>
<th>PE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anxious Attach</td>
<td>.503**</td>
<td>.574**</td>
<td>.241**</td>
<td>.333**</td>
<td>.215**</td>
</tr>
<tr>
<td>Avoidant Attach</td>
<td>.402**</td>
<td>.271**</td>
<td>.091</td>
<td>.267**</td>
<td>.001</td>
</tr>
<tr>
<td>Mother Authoritarian</td>
<td>.322**</td>
<td>.261**</td>
<td>.166*</td>
<td>.373**</td>
<td>-.011</td>
</tr>
<tr>
<td>Father Authoritarian</td>
<td>.315**</td>
<td>.225**</td>
<td>.158</td>
<td>.453**</td>
<td>.289**</td>
</tr>
<tr>
<td>Extraversion</td>
<td>.272**</td>
<td>.294**</td>
<td>.085</td>
<td>.230**</td>
<td>.162</td>
</tr>
</tbody>
</table>

*Significant difference at $p < .05$

**Significant difference at $p < .001$

Mistakes (CM), Doubts About Actions (DAA) and Parental Criticism (PC) all were positively correlated with all the predictor variables. The strongest correlations were found between CM and DAA and higher scores of anxious attachment style indicating that higher scores of Concern Over Mistakes and Doubts About Actions scales were associated with higher scores of anxious attachment. Higher scores on the Personal Standards (PS) scale were positively correlated with higher scores of anxious attachment
and higher scores indicating authoritarian parenting style but only for mothers. These correlations indicate that individuals with high personal standards also report a mother that is more characteristic of authoritarian parenting and report having higher levels of anxious attachment characteristics. Results from the Parental Expectations (PE) scale found two positive correlations with scores from the anxious attachment scale and the father authoritarian scale. It is interesting to note that scores from the mother authoritarian parenting style were not related to parental expectations but the father authoritarian scale was related. This finding may suggest that individuals feel that fathers exhibiting authoritarian characteristics set higher expectations than mothers who exhibit authoritarian characteristics.

Regression Analyses

The following assumptions were tested regarding the multiple regression using the residual scatterplots: outliers, normality, linearity, Homoscedasticity, and independence of residuals.

Concern Over Mistakes

A simultaneous regression analysis was performed between the MPS subscale Concern Over Mistakes and five predictor variables: anxious and avoidant attachment scores as measured from the ECR-R, mother and father authoritarian parenting style from the Parenting Questionnaire and the extraversion/surgency scale from the ATQ (see Table 2). A significant multiple correlation was found, $R = .647$, $F(5, 139) = 20.04$, $p < .001$. The five predictors together accounted for 41.9% of the variance in Concern Over Mistakes scores. All five of the predictor variables were statistically significant: anxious
Table 2

*Regression Results for Predicting MPS Concern Over Mistakes*

<table>
<thead>
<tr>
<th>Predictor</th>
<th>$\beta$</th>
<th>$F$</th>
<th>df</th>
<th>p-value</th>
<th>$\Delta R^2$</th>
<th>Adj. $R^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concern Over Mistakes</td>
<td>20.04</td>
<td>5, 139</td>
<td>&lt;.001</td>
<td>.419</td>
<td>.398</td>
<td></td>
</tr>
<tr>
<td>Anxious Attachment</td>
<td>.324**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Avoidant Attachment</td>
<td>.264**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mother Authoritarian</td>
<td>.178*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Father Authoritarian</td>
<td>.213*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Extraversion Temp.</td>
<td>.135*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

** $p < .001$
* $p < .05$

attachment style ($\beta = .324, p < .001$), avoidant attachment style ($\beta = .264, p < .001$), mother’s authoritarian parenting style ($\beta = .178, p = .011$), father’s authoritarian parenting style ($\beta = .213, p = .002$), and extraversion/surgency temperament style ($\beta = .135, p = .049$). Significant bivariate correlations were found for all five predictor variables ($p < .001$).

Doubts About Actions

A simultaneous regression analysis was also used to predict Doubts about Actions using the same five predictor variables as the Concern Over Mistakes subscale (see Table 3). A significant multiple correlation was found, $R = .628, F(5, 139) = 18.14, p < .001$. The five predictor variables together accounted for 39.5% of the variance in Doubts About Actions scores. Anxious attachment style ($\beta = .474, p < .001$) and extraversion/surgency temperament style ($\beta = .159, p = .023$) were the only statistically
Table 3

*Regression Results for Predicting MPS Doubts About Actions*

<table>
<thead>
<tr>
<th></th>
<th>$\beta$</th>
<th>$F$</th>
<th>$df$</th>
<th>p-value</th>
<th>$\Delta R^2$</th>
<th>Adj. $R^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doubts About Actions</td>
<td></td>
<td>18.14</td>
<td>5, 139</td>
<td>&lt;.001</td>
<td>.395</td>
<td>.373</td>
</tr>
<tr>
<td>Anxious Attachment</td>
<td>.474**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Avoidant Attachment</td>
<td>.106</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mother Authoritarian</td>
<td>.126</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Father Authoritarian</td>
<td>.088</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Extraversion Temp</td>
<td>.159*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

** $p <.001$
* $p <.05$

significant predictors found in this model. All five predictor variables produced significant bivariate correlations ($p < .010$).

**Personal Standards**

Another simultaneous regression analysis was used to predict Personal Standards (see Table 4) scores using the same five predictor variables (anxious and avoidant attachment styles, mother’s and father’s authoritarian parenting style, and extraversion temperament style). A significant multiple correlation was found, $R = .299$, $F(5, 139) = 2.725, p = .022$. The five predictors together accounted for 8.9% of the variance in Personal Standards scores. The only statistically significant predictor was anxious attachment style ($\beta = .182, p = .039$). Anxious attachment style as well as mother
Table 4

Regression Results for Predicting MPS Personal Standards

<table>
<thead>
<tr>
<th></th>
<th>β</th>
<th>F</th>
<th>df</th>
<th>p-value</th>
<th>ΔR²</th>
<th>Adj. R²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal Standards</td>
<td>2.725</td>
<td>5,139</td>
<td>.022</td>
<td>.089</td>
<td>.057</td>
<td></td>
</tr>
<tr>
<td>Anxious Attachment</td>
<td>.182*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Avoidant Attachment</td>
<td>.022</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mother Authoritarian</td>
<td>.091</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Father Authoritarian</td>
<td>.147</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Extraversion Temp.</td>
<td>.022</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

** p < .001
* p < .05

and father authoritarian parenting style produced significant bivariate correlations (p < .05).

Parental Expectations

A simultaneous regression analysis was used to predict Parental Expectations using the same five predictor variables (see Table 5). A significant multiple correlation was found, $R = .349$, $F(5, 139) = 3.85$, $p = .003$. The five predictor variables together accounted for 12.2% of the variance in Parental Expectation scores. Two of the predictor variables were statistically significant: anxious attachment style ($\beta = .176$, $p = .043$) and father’s authoritarian parenting style ($\beta = .272$, $p = .001$). Anxious attachment style, father authoritarian parenting style and extraversion/surgency temperament style all yielded significant bivariate correlations (p < .05).
Table 5

*Regression Results for Predicting MPS Parental Expectations*

<table>
<thead>
<tr>
<th></th>
<th>$\beta$</th>
<th>$F$</th>
<th>df</th>
<th>p-value</th>
<th>$\Delta R^2$</th>
<th>Adj. $R^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parental Expectations</td>
<td>3.857</td>
<td>5, 139</td>
<td>.003</td>
<td>.122</td>
<td>.090</td>
<td></td>
</tr>
<tr>
<td>Anxious Attachment</td>
<td>.176*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Avoidant Attachment</td>
<td>.034</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mother Authoritarian</td>
<td>.113</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Father Authoritarian</td>
<td>.272**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Extraversion Temp</td>
<td>.079</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

** $p < .001$
* $p < .05$

**Parental Criticism**

Lastly, simultaneous multiple regression was used to predict Parental Criticism using the same five predictor variables (See Table 6). A significant multiple correlation was found, $R = .607, F(5, 139) = 16.21, p < .001$. The five predictor variables together accounted for 36.8% of the variance in Parental Criticism scores. The following three predictors were statistically significant: anxious attachment style ($\beta = .156, p = .034$), mother’s authoritarian parenting style ($\beta = .247, p = .001$) and father’s authoritarian parenting style ($\beta = .358, p < .001$). All five of the predictor variables produced significant bivariate correlations ($p < .01$).
### Table 6

*Regression Results for Predicting MPS Parental Criticism*

<table>
<thead>
<tr>
<th>Variable</th>
<th>$\beta$</th>
<th>$F$</th>
<th>$df$</th>
<th>p-value</th>
<th>$\Delta R^2$</th>
<th>Adj. $R^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parental Criticism</td>
<td>16.207</td>
<td>5, 139</td>
<td>&lt;.001</td>
<td>.368</td>
<td>.346</td>
<td></td>
</tr>
<tr>
<td>Anxious Attachment</td>
<td>.156*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Avoidant Attachment</td>
<td>.135</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mother Authoritarian</td>
<td>.247**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Father Authoritarian</td>
<td>358**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Extraversion Temp.</td>
<td>.133</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

** $p < .001$
* $p < .05$
CHAPTER V

DISCUSSION

General Discussion

The three hypotheses were partially supported in this study. Adult attachment, perceived parenting style and adult temperament all appear to play a role in the development of perfectionism. In general, the results indicate that adult attachment style, parenting style and adult temperament best explained and predicted the Concern Over Mistakes dimension of perfectionism, although other associations were notable as well.

Adult Attachment

First, participants scoring high on the anxious attachment style subscale of the ECR-R was the only predictor variable that was statistically significant in all five of the models, indicating that characteristics of an insecure attachment style are predictive of all dimensions of perfectionism. Adult anxious attachment style includes aspects such as having a fear of rejection. Therefore, theoretically speaking, it makes sense that someone who is afraid of being rejected will develop characteristics of perfectionism because they will try not to be rejected. It may be that insecurely attached individuals who are afraid of being rejected by a partner may also be fearful of being rejected by others as well. That is, the fear of rejection carries over to other situations where the person is concerned about making mistakes and may doubt their abilities in general. Future research should
also examine the relationship between secure attachment and the dimensions of perfectionism, as well as compare insecure and secure attachment styles directly.

Parenting Style

Second, participants that reported that their mother practiced more of an authoritarian parenting style was predictive of Concern Over Mistakes, and perceived Parental Criticism dimensions of perfectionism. Participants that rated their father high on the authoritarian parenting style was predictive of Concern Over Mistakes, perceived Parental Expectations and perceived Parental Criticism. Frost, Lahart, and Rosenblate (1991) found similar results regarding mother’s suggesting that perfectionistic tendencies were accompanied by daughters who perceived their mothers as harsh. It is interesting to note that mother’s authoritarian parenting style was not a predictor of perceived parental expectations. This finding could suggest that even if a child perceives their mother as very harsh and critical, they do not necessarily feel that their mother has high expectations. More research is needed to explore this possibility. Much of the past literature on parenting styles, however, suggests that authoritarian parenting style in general is correlated with maladaptive traits, and the finding in this study is consistent with past work. That is, an authoritarian parenting style is clearly associated with the more maladaptive aspects of perfectionism. It makes intuitive sense that children whose parents were cold, demanding, or never felt the child was good enough would later develop maladaptive perfectionism characteristics.
Third, Extraversion/surgency temperament style predicted Concern Over Mistakes, Doubts About Actions, and perceived Parental Expectations. However, extraversion/surgency temperament style provided the least amount of variance accounted for in each of the regression models. That being said, these three dimensions of perfectionism are typically regarded to as maladaptive and have been correlated to some psychopathologies. This is interesting because most research conducted on temperament has linked extraversion temperamental style to psychopathology (Muris, Meesters, & Blijlevens, 2007; Nigg, 2006). Therefore, certain temperament traits may be the biological predisposition to psychopathology and the presence of perfectionism may be one of the factors that lead to the development of a disorder. Obviously, this is speculative considering the correlational data in this study, and the relationship between perfectionism, psychopathology and temperament should be more closely examined longitudinally in order to understand the possible causal pathways. It is important to note that only the extraversion/surgency construct on the ATQ was used in the analyses. Future research should incorporate all scales to aid in the understanding of the relationship between perfectionism and temperament.

Summary

Past research has linked excessive concern over mistakes, high perceived parental criticism and expectations and having high doubts about actions to maladaptive tendencies including a wide array of psychopathologies. The results of this study suggest that, in general, the maladaptive traits of perfectionism are predicted most strongly by
scoring highly on insecure attachment styles (both anxious and avoidant) and by perceiving parents as more authoritarian. The link between extraversion/surgency temperament and maladaptive perfectionism is less clear, but it may be more of an indirect route to the development of perfectionism.

Personal Standards—which are seen as the more positive dimension of perfectionism—produced much lower correlates with the predictors and only had anxious attachment style as a significant predictor. It is important to note that the predictors used in this study seem to be much better suited to explain the negative or maladaptive traits of perfectionism. This makes theoretical sense because if high Personal Standards are a positive aspect of perfectionism, secure attachment and authoritative parenting style may be better suited to predict and explain the development of more adaptive aspects of perfectionism. Past research has shown that having a secure attachment and authoritative parenting will likely allow the child to adopt healthy mechanisms for success. Having high Personal Standards may be a product from a consistent, nurturing, and safe environment that will later lead a person to success.

In summary, adult attachment style, adult temperament, and perceived parenting styles are predictive of most maladaptive perfectionism traits. The integrative transactional model that Flett, Hewitt, Oliver, and Macdonald (2002) suggest incorporates all aspects of a person’s life as factors that may influence the development of perfectionism (e.g., parent factors, child factors, environmental factors, etc.). This study offers partial support for the attachment and parenting style dimensions of the model retrospectively. More research on temperament needs to be conducted, however, regarding its relationship with perfectionism. For example, this study found that
extraversion temperament style predicts some aspects of perfectionism (mostly those seen as maladaptive) but not others. Until future research solidifies the relationship between these two variables, all conclusions will remain highly speculative. The integrative transactional model also includes environmental factors (e.g., culture, peers, teachers, etc.) that need to be examined in the future.

Limitations

There are a number of limitations to take into consideration when interpreting the results of this study. First, all data was collected as self-report data. Therefore, social desirability may factor into the responses. For example, some participants may try and guess what is being studied and answer in a way that they believe the researcher wants them to. Therefore, some of the responses may not be truthful. Second, no parent data was collected. Each parental factor was scored by the perception of the child. Although the perception of the child is very useful because it is the building block for the development of some personality traits, parent data would have offered another perspective and could have suggested a difference of opinion, which would have been very interesting. Some parents may not know or feel that they are being overly critical or setting very high standards on a child; they may just feel that they are setting their child up for success. Children may view this as harsh and critical parenting. It seems unlikely that children and parents are going to have the same perception on parenting practices. This lack of congruent thinking could factor in to early intervention strategies to make the parent aware of the perceptions of the child and vise versa.
Implications for Future Research

Future research should examine the development of perfectionism using longitudinal methodology and should include parents as well as their children. It would be interesting to see how perceived parenting styles and perceived expectations and criticism differ from what the parent actually reports from his or her point of view. Longitudinal data could also monitor developmental milestones in which different types of factors (parental, peer, individual) may impact the development of perfectionism differently. Longitudinal data following children from an early age could also offer insight as to when perfectionism or aspects of perfectionism first develop.

Future research should also include data on peer influences regarding the development of perfectionism. Beginning in early adolescence, peers are around each other and influence each other more than family members (Furman & Buhrmester, 1985) and therefore, may play a large role in the development of perfectionism. Including environmental factors as well as child and parental factors in a study would help researchers to evaluate Hewitt and Flett’s integrative transactional model of the development of perfectionism.

The exploration of temperament as a developmental predictor to perfectionism also needs to be expanded. As mentioned above, only one study has examined the relationship between perfectionism and adult temperament characteristics. Similarly, perfectionism and personality traits should be explored further to find the relationship between different personalities and perfectionism. One can speculate that persons exhibiting high levels of neuroticism and conscientiousness would hypothetically display
more perfectionistic tendencies. Unfortunately, the research on perfectionism and specific personality traits is lacking.
REFERENCES
REFERENCES


INFORMED CONSENT FOR RESEARCH

PARTICIPATION

Title of Study: Factors Influencing the Development of Personality Types

Investigator: Kyra L. Davies, kyraldavies@yahoo.com

Purpose of Study: Thank you for your participation in this study. The present study is looking at parental factors and individual factors that may contribute to different personality types.

Procedures: You will be asked to fill out a series of questionnaires that have been validated through other research studies.

Duration: Your participation will take about 30 minutes.

Right to Refuse or Withdraw from the Study: If you feel uncomfortable answering any item, you may skip that item without penalty. If you have any questions or concerns or need any further clarification for any of the questionnaires or items please feel free to ask. Your participation in this study is voluntary. You have the right to withdraw from the study at any time without any penalty. You may contact the investigator at any time during the course of the study with any concerns. If the investigator cannot answer the questions, you may withdraw your completed answers from the study.

Protection of Confidentiality: Your responses that you submit will remain confidential. All data submitted will be given an ID number but your name will not be exposed. This form will be the only piece of paper with your name on it and your ID number will be on this form for ethical reasons. For example, if you choose to withdraw your answers from the study, we have to be able to link your name and ID in some way. However, the informed consent will not be kept with the submitted answers. Since your personal information is kept confidential, you are encouraged to answer each item honestly and completely. But again, if you feel uncomfortable answering an item, you may skip it without any penalty.

Questions and Results: If you have any questions, concerns, or comments about the study or the informed consent process, please contact Kyra Davies, kyraldavies@yahoo.com or Dave Hibbard at 898-5430. You may also ask Kyra Davies for a copy of the results of this study.

I understand that by signing this form I acknowledge that I have received a description of my participation in this study, that I have read and understood the description, and that I am voluntarily agreeing to participate within this study. I am aware that I may choose to end my participation at any time without consequences.

Your Name-Printed  Your Name Signed  Date
DEBRIEFING

Thank you so much for your participation in this study!

The questionnaires filled out in this study will, in general, be utilized to examine individual factors and parental factors that may contribute to the development of perfectionism.

Specifically the data from this study will examine the relationship between the development of perfectionism and adult temperament, adult attachment, and parenting styles. In general, research has found that authoritarian parenting may lead to individuals developing more perfectionistic personality types. The relationship between adult attachment and perfectionism has not yet been explored so the findings between attachment styles and perfectionism will be the first! Adult temperament in general is not a widely studied topic but there is some research suggesting that persons that scored higher on a perfectionism questionnaire scored low on a novelty seeking subscale. Persistence and harm avoidance are temperament characteristics that are related to perfectionism. Although research has been conducted in this area, most of the research was conducted in a clinical setting. Therefore, the data collected today will contribute to research on populations other than the clinical setting. Again, thank you so much for your participation!

If you have any questions, comments, or concerns about this study, please contact Kyra Davies at kyraldavies@yahoo.com, or Dave Hibbard at 898-5430.

If you feel that this study has overwhelmed you psychologically and are feeling distressed, you may contact the Psychological Counseling Center at CSU Chico at (530) 898-6345.

You may obtain results of this study beginning May 1, 2009 by contacting Kyra Davies at kyraldavies@yahoo.com.
APPENDIX C
DEMOGRAPHIC INFORMATION

**Personal Information**

ID Number (on Informed Consent): ___________

Sex: Male _____ Female ______

Age: ______

Ethnicity:
- African American
- Asian
- Caucasian
- Mixed Ethnicity
- Native American or Alaska Native
- Native Hawaiian
- Pacific Islander
- Other

Marital Status:
- Single
- In a relationship
- Married
- Divorced
- Widowed

**Academic Information**

What is your current classification?

- Freshman
- Sophomore
- Junior
- Senior

What is your major __________

Approximately, what is your current grade point average? ______

Approximately, what was your grade point average in high school? ______