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Attachment Styles and Trust Propensity in Females with Borderline Personality Disorder

A dissertation submitted in partial fulfillment
of the requirements for the degree of
Doctor of Philosophy in Counselor Education

by

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The University of Memphis
Bachelor of Arts in Psychology, 2007
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This dissertation is approved for recommendation to the Graduate Council.

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Abstract

Borderline Personality Disorder (BPD) is one of the most frequently encountered and complex disorders in mental health care. Interpersonal impairment is a central issue for individuals with BPD. This complex disorder has received negative stigma along with historically more females than males receiving this diagnosis (Linehan, 1993). Therefore, this study examined a clinical sample of 30 females diagnosed with BPD. Through the collection of data this study used the following measures: a basic demographic questionnaire gathering specific age, ethnicity, current relationship status, parental relationship status, the Experiences in Close Relationships Scale (ECR; Brennan, Clark & Shaver, 1998), and the Propensity to Trust Scale (PTS; Frazier, Johnson, & Fainshmidt, 2013). The data was evaluated through descriptive statistics, a Shapiro-Wilk's Test of Normality, a Kurkal-Wallis H test, and a Spearman's rho correlation. Two tailed Cronbach's α=.05 level was used as the significance standard for all statistical procedures. As hypothesized, $r_s(28) = -.375$, $p = .041$, the data indicated a significant negative correlation between avoidance and propensity to trust in females with BPD. Additionally, congruent with previous meta-analytic research findings (Agrawal, Gunderson, Holmes, & Lyons-Ruth, 2004), the majority of participants 93% reported an insecure style of attachment with preoccupied as the most frequent style of attachment reported. The following manuscript examines attachment styles and propensity to trust in females with BPD; clinical implications and future research are discussed.

Keywords: borderline personality disorder, attachment styles, propensity to trust, avoidance, anxiety

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CHAPTER ONE: INTRODUCTION

STATEMENT OF THE PROBLEM

Introduction

Borderline Personality Disorder (BPD) is a complex psychiatric condition that significantly impacts one's overall quality of life and ability to function socially (Hill et al., 2008; Lieb, Zanarini, Schmahl, Linehan & Bohus, 2004; Linehan, 1993; Skodol, 2002). BPD is categorized by a pattern of impaired functioning in the following primary areas: emotions, cognitions, identity, behaviors, and interpersonal relationships (American Psychiatric Association [APA], 2013; Lieb, Zanarini, Schmahl, Linehan & Bohus, 2004). Researchers have examined BPD in terms of pathology (Zanarini, Williams, Lewis & Reich, 1997), symptomology (Silk, Lee, & Hill, 1995), comorbidity (APA, 2001; Grant et al., 2008), various treatments (APA, 2001; Clarkin, Levy, Lenzenweger & Kernberg, 2007; Linehan, 1993), and associated traumatic experiences (Lewis & Christopher, 1989).

Impairments within interpersonal functioning have been found to be the signature characteristic for individuals who struggle with BPD (Hill et al., 2008; Lieb, et al., 2004). This impaired ability to maintain healthy interpersonal relationships (i.e., occupational, familial, romantic) for daily functioning is central to the perpetuation and exacerbation of symptoms related to BPD (Barnow et al., 2009). Previous research has pointed to emotional dysregulation found within individuals with BPD as the main source underlying interpersonal impairment as initially proposed by Linehan (1993), and confirmed by Donegan et al. (2003) and Putnam and Silk (2005). Additionally, research has also established that interpersonal impairment is associated with a variety of styles of attachment, including ambivalent or preoccupied and fearful insecure styles of attachment (Agrawal, Gunderson, Holmes & Lyons-Ruth, 2004). Research

endeavors have determined the importance of being able to trust others as an essential aspect for effectively forming and maintaining healthy relationships (Morgan & Hunt, 1994). More specifically, the current body of research lacks understanding of style of attachment as it relates to trust propensity within relationships for females with BPD from a traits theory perspective.

Prevalence

BPD is considered one of the disorders most frequently encountered by mental health care providers, as evidenced by rates ranging from 1.6% to as high as 5.9% (APA, 2013; Grant et al., 2008; Loranger, Satorious, Adreoli & Berger, 1994). Currently, incidences of BPD differ depending upon specific treatment settings. Primary care centers report the rate of BPD to be approximately 6% among individuals, whereas outpatient mental health clinics experience rates of up to 10% of people seeking services (Korzekwa, Dell, Links, Thabane, & Webb, 2008). Inpatient treatment centers report that their clinicians see rates from 20-40% of individuals treated for BPD (APA, 2000). A clear majority of individuals diagnosed with BPD are female (Linehan, 1993; Widiger & Weissman, 1991). However, this is disproportionate to the actual prevalence between genders, according to a recent meta-analytic survey showing the male and female incidence of BPD as remaining roughly equal (Grant et al., 2008). For the purposes of generalizability, the study utilized a purposeful sample method of all females to represent the predominant population receiving a BPD diagnosis and therefore receiving BPD-specified treatment. “The greatest gap in knowledge concerns those persons who have the fewest resources. Literature is limited about persons with the borderline personality disorder who have multiple dysfunctions and are the most frequent users of mental health care” (Nehls, 1998, p. 108).

Symptoms

The central features found within individuals with BPD are outlined in the Diagnostic and Statistical Manual of Mental Disorders-V (DSM-V; APA, 2013). These characteristic pervasive patterns, seen during late adolescence and early adulthood, include: identity disturbance, impulsive behaviors, ridged dichotomous cognitions, frequently changing intense vacillating emotions, and tumultuous unstable interpersonal relationships (APA, 2013). The key feature of BPD is interpersonal relationships impairment and has been attributed to an underlying intense fear of perceived abandonment, explosive anger, pervasive feelings of inner emptiness, and a frequent, sudden idealization and devaluation referred to as splitting (Lieb, et al., 2004). Additionally, individuals with BPD experience episodic anxiety, dissociation, frequent intense emotion vacillation, and report a lack of meaningful supportive relationships (APA, 2013). Finally, impulsivity can manifest itself within BPD, such as through excessive gambling and spending, binge eating, substance use, high-risk sex, and other high-risk behaviors not including the separate aspect of chronic and impulsive recurrent suicidal ideations, behaviors, gestures, threats, or self-harming mutilation behavior (APA, 2013; Lieb, et al., 2004).

Severity

One factor found to exacerbate symptoms of BPD, including suicidal tendencies, is identified as times of interpersonal dysfunction (Brodsky, Groves, Oquendo, Mann & Stanley, 2006). BPD is associated with elevated rates of mortality, with 10% of all BPD patients completing suicide and many more attempting suicide and requiring mental health care treatment (Zanarini, Frankenburg, Reich & Fitzmaurice, 2011). Correspondingly, individuals with BPD have been found to be 50 times more likely to die by suicide than the general population (Brown, Comtois & Linehan, 2002; Oldham, 2006). Linehan (1993) describes the phenomenon of vulnerability to suicidal tendencies seen within individuals with BPD as follows:

> It is the experience of their own vulnerability that sometimes leads borderline individuals to extreme behaviors (including suicidal behaviors), both try to take care of themselves and to alert the environment to take better care of them. Completed suicide among borderline individuals is inevitably an act of final hopelessness that the vulnerability will never lessen. It is sometimes also a last communication that more was needed. Understanding this vulnerability and keeping it in mind are crucial for therapeutic effectiveness. (p. 69)

Interpersonal issues such as those stemming from a disturbed sense of self, impulsive behavior, breakups, arguments, and attempts to avoid abandonment are central to the pervasiveness and severity of BPD (Lieb, et al., 2004; Zanarini et al., 2011) and are major contributing factors for suicidal behavior, including self-harm, attempts at suicide, and completed suicide (Brodsky et al., 2006). Therefore, further examination of possible underlying interpersonal factors of this disorder is merited. It is unknown why relationships impact individuals with BPD in this way (Linehan, 1993). This issue necessitates more attention to the underlying mechanisms of interpersonal impairment beyond the current fractional understanding.

Rationale for the Study

The vast majority of current research on trust has resulted in varied conclusions due to inconsistent definitions for trust. Additionally, measuring trust is not an innovative concept, but has been around since 1967 with Rotter's seminal interpersonal trust measurement. However, throughout the history of understanding trust, most researchers measured trust under the definition that trust is understood to be a fluid psychological state that attends to environmental clues. Unlike previous research related to social contextual aspects of trust, the Propensity to Trust Scale (PTS) introduced by Frazier, Johnson, and Fainshmidt (2013), focuses on the personality trait aspect of trusting someone void of social contextual clues.

However, much of existing research on propensity to trust thus far has focused primarily on the fields of business, management, human resources, and behavioral economics (Ashleigh,

Higgs & Dulewicz, 2012; Camerer, 2003; Gill, Boies, Finegan & McNally, 2005; Mayer, Davis & Schoorman, 1995). Notably, minimal social science-specific research exists on this topic of understanding how attachment style may impact propensity to trust. More specifically, there is an even greater dearth of research on understanding how style of attachment and propensity to trust are related in females with BPD. As previous research, has solicited this need, "future research should attempt to incorporate an understanding of the interpersonal context in which personality dysfunction emerges and is maintained, as it is the same context that will ultimately provide the structure and support for emotional health" (Hughes, Crowell, Uyeji & Coan, 2012, p. 29). Therefore, understanding trust from a personality traits perspective for females with BPD will aid to address the central interpersonal impairment issues underlying this disorder.

Trust as a Prerequisite

Person-centered therapy techniques have been touted for having a foundational bedrock in trust between the client and therapist, as such trust has been considered one of the factors required for effective psychotherapy (Kirschenbaum & Jourdan, 2005). Rogerian techniques rely heavily on the existence of trust, with the specific assumption that the client has the ability or disposition to place trust in the therapist, and then within the therapeutic process of counseling. This person-centered intention to foster trust within the therapeutic relationship has the ultimate purpose of the patient learning to develop a sense of inner trust of his or her own emotions, thoughts and perception of reality (Rogers, 1951). Therefore, provided that trust is an essential factor for effective therapy (Kirschenbaum & Jourdan, 2005), it is logical to implore for a greater understanding of the interpersonal nature of a specific population's disposition or tendency to trust others, such as females with BPD. Conversely, the tendency to over-trust may be an aspect of concern for specific styles of attachment within individuals with BPD, as variations of

interpersonal impairment may exist accordingly, further contributing to the considerable amount of preexisting research, examining individuals with BPD and style of attachment.

Professional Adherence

The American Counseling Association (ACA) A.7a. calls for its members to advocate on all levels to address issues that may inhibit progression for clients (2014). Counselors are required to adhere to these ethical standards as defined by the ACA. However, no research has explored the aspect of trust propensity within interpersonal relationships found in individuals with BPD (APA, 2001). As counselors are bound to adhere to ethical standards as provided by the ACA, it is important that we explore additional dimensions of individuals with BPD. It is therefore professionally and ethnically necessary to identify potentially underlying dispositions to trust, and their associations to fundamental aspects such as attachment, in an effort to better understand and thereby advance treatment methods and focus for of this complex BPD population.

Purpose of the Study

The overall objective of this study was to examine the association that exists between style of attachment of females with BPD and their propensity to trust. The specific objective was to understand how BPD potentially impacts propensity to trust and associated style of attachment in 30 females with a Borderline Personality Disorder diagnosis. To examine the association between propensity to trust and style of attachment, this study used the Propensity to Trust Scale (PTS; Frazier et al., 2013) and the Experiences in Close Relationship Scale (ECR; Brennan et al., 1998). The researcher provided a background explanation of BPD, attachment theory, trust, and the need to better understand interpersonal trust within females with BPD. The eventual purpose of this study was to gain a better understanding of underlying disposition to trust within this population, in order to further treatment research related to addressing skills for relationship

improvement. Relationship impairment is the most paramount issue for individuals with this disorder; therefore, it is logical to concentrate research on improving treatment within this area. This may be done by proposing future studies that examine a more in-depth trust education version of the interpersonal effectiveness module within Dialectical Behavior Therapy (DBT; Linehan, 2014), compared to DBT treatment as usual without trust education. Further refinement of the currently limited interpersonal effectiveness skills treatment for individuals with BPD is central to potentially decreasing significant symptoms of BPD (Brodsky et al., 2006).

Significance of the Study

These findings may be influential to the primary therapeutic relationship. Trust is seen as a crucial aspect of effective therapy according to Carl Rogers (Kirschenbaum & Jourdan, 2005). Through understanding styles of attachment of females with BPD as they relate to their propensity to trust others, modifications may be made within therapy to address the inability to form and maintain functional relationships (e.g., occupational, socially supportive, romantic, familial). Some of these modifications may include introducing the concept and importance of trust within counseling, collaboratively identifying ways to promote trust within counseling, and identifying trustworthy behavior through psychosocial educational methods. Additional understanding of the interpersonal aspect of BPD may address significant triggers for impulsive behavior, including suicide, and thus decrease and/or prevent rates of suicide while treating this population (Brodsky et al., 2006). Further understanding of this topic may have implications to clarify current uncertainties related to the associated factors with interpersonal dysfunction, aside from emotion dysregulation (Donegan et al., 2003; Linehan, 1993). Moreover, this study may either confirm or contradict previous varied findings from attachment theorists' research that indicate individuals with BPD possess a preoccupied and/or fearful style of attachment (Choi-Kain, Fitzmaurice, Zanarini, Laverdière & Gunderson, 2009; Sinha & Sharan, 2007).

The implications for this study could further the understanding of propensity to trust may translate into understanding pivotal interpersonal impairment characteristics of individuals with BPD. Additional contributions include possibly identifying areas for improving the therapeutic alliance for improved treatment outcomes and decreasing premature discontinuation of therapy. To the researcher's knowledge, there is currently no research that exists that has examined trust propensity as it relates to styles of attachment within an all-female BPD sample. This current gap in the literature is preventing a complete understanding of the interpersonal impairment mechanisms within BPD. Consequently, the mental health care field may be inadvertently missing crucial aspects that could further pathology understanding, contribute to more successful treatment outcomes for females with BPD, and strengthen the therapeutic alliance in working with individuals of this population. Clinical implications for findings and further research will be addressed more extensively within the discussion chapter of this manuscript.

Research Questions

The following five research questions direct the current study:

Research Question 1: Is there an association between the four attachment styles and propensity to trust scores?

Research Question 2: Does the avoidance domain within attachment styles correlate with propensity to trust scores?

Research Question 3: Does the anxiety domain within attachment styles correlate with propensity to trust scores?

Research Question 4: Is there an association between relationship status and propensity to trust scores?

Research Question 5: Is there an association between parental relationship status and propensity

to trust scores?

Delimitations

Many of the female participants within the study were receiving treatment for other mood disorders in addition to the BPD diagnosis. Consequently, for the purposes of refining the current understanding of the mechanisms underlying interpersonal impairment within females with BPD, there will be no specification or study of the co-occurring disorder(s). Additionally, no diagnostic test was provided to the participants to confirm their Borderline Personality Disorder outside of a previous history and meeting five of the nine criteria for Borderline Personality Disorder as specified within the DSM-V and clinical verification per a board-certified psychiatrist (APA, 2013).

Limitations

Limitations of this study include the single location in which the survey methods were implemented. All sampling took place at a private practice mental health clinic in the mid-southern United States, thus limiting the sampling pool to one geographic location. While participants were not all born and raised in the same region of the United States, they all currently reside within the same general region. Additionally, many health insurance providers will often limit their reimbursement on the treatment of personality disorders. Therefore, it is theorized that participants who volunteered for this study may have more self-insight and acceptance toward the nature of their symptoms and BPD, which allowed them to acknowledge their actual diagnosis. Thus, this factor could possibly impact this sample of participants, who may not completely reflect the full breadth of this population. Additionally, the sample size was limited to 30 participants contributing to a limited statistical power and, consequently, generalizability, of sample findings to the overall population. This clinical sample was comprised of all females aiding in the understanding of the demographic most frequently diagnosed with

BPD, however neglecting potential gender differences. Therefore, by not including males by design and inadvertently not having sufficient minorities within the clinical sample; findings from the results cannot be applied to these populations.

Definition of Terms

Attachment

> "Attachment refers to an affectional tie that one person (or animal) forms to another specific individual. Attachment is discriminating and specific. Like "object relations," attachments occur at all ages and do not necessarily imply immaturity or helplessness" (Ainsworth, 1969, p. 2).

Attachment Theory:

> A psychological model that attempts to describe the dynamics of long-term and short-term interpersonal relationships between humans. Specifically, attachment theory addresses how humans respond within relationships when hurt, separated from loved ones, or perceiving a threat (Waters, Corcoran & Anafarta, 2005).

Borderline Personality Disorder (BPD):

> Cluster B personality disorder with essential features including a pattern of impulsivity behaviors and unstable and intense emotions with impaired interpersonal relationships, and self-image. Other symptoms include intense fears of abandonment and intense anger (APA, 2013).

Disposition to Trust:

> "The extent to which one displays a consistent tendency to be willing to depend on general others across a broad spectrum of situations and persons" (McKnight & Chervany, 2001, p. 38).

Dissociation:

Experiences involving detachment from reality ranging from mild daydreaming to a severe split from reality as found within psychosis (Dell, 2006).

Faith in Humanity

Faith in humanity is the concept of the global view of underlying expectations and beliefs toward nonspecific other people and human nature (McKnight & Chervany, 2001).

Mentalization

The ability to recognize the feelings and intentions of self and others (Gunderson, 2007).

Personality:

The specific individual pattern in how people think, feel, and behave (Kassin, 2003).

Personality Disorder:

A classification of mental disorder characterized by enduring maladaptive patterns of behavior, cognition, and inner experience that are associated with significant suffering or impairment in daily functioning, and are exhibited across many contexts and deviating markedly from those accepted by the individual's culture (APA, 2013).

Trust:

"… a psychological state comprising the intention to accept vulnerability based upon the positive expectations of the intentions or behavior of another" (Rousseau, Sitkin, Burt & Camerer, 1998, p. 395).

Trusting Beliefs:

"Cognitive perceptions about the attributes or characteristics of the trustee" (McKnight & Chervany, 2001, p. 36).

Trust Propensity:

A general disposition or tendency to trust others combining a trusting stance and faith in humanity, regardless of social context clues and relationship-specific information (Mayer, Davis & Schoorman, 1995; McKnight, & Chervany, 2001).

Trusting Stance:

"Regardless of what one assumes about other people generally, one assumes that one will achieve better outcomes by dealing with people as though they are well-meaning and reliable" (McKnight, & Chervany, 2001, p. 39).

Trait Theory:

An approach to the study of human personality focused on the measurement of traits, which can be defined as habitual patterns of behaviors, cognitions, and feelings. According to this perspective, traits are relatively consistent over time, differ across individuals, and influence behavior (Kassin, 2003).

Splitting

Mental phenomena commonly found within individuals with Borderline Personality Disorder characterized by polarization others. (Linehan, 1993).

Summary

The overall objective of this study was to examine the association that exists between style of attachment of females with BPD and their propensity to trust. The specific objective was to understand how BPD potentially impacts propensity to trust and associated style of attachment in thirty females with a Borderline Personality Disorder diagnosis. The ubiquitous and complex

nature of BPD is reason to further investigate this disorder. Interpersonal impairments are a fundamental aspect of this disorder, including splitting, impaired ability to mentalize, disturbed sense of self, chronic feelings of emptiness, intense and uncontrollable episodic anger, dysphoria, anxiety, and extreme fears of abandonment. Another empirically established understanding of this disorder is how insecure attachment style is a significant mechanism of the interpersonal impairment characteristic understood to exist within BPD. Oftentimes the aspect of interpersonal impairment can create a worsening of symptoms, including suicidal ideations and lethal behavior (Brodsky et al., 2006).

While much of counseling's guiding theory includes Rogerian person-centered therapy, which relies heavily upon the client's ability to develop trust toward the therapist, this disposition to trust for individuals with BPD remains unknown. Much research until this point has conceptualized BPD's interpersonal impairment within an emotion dysregulation and the influence of the social environmental perspective (Donegan et al., 2003; Linehan, 1993). However, there exists no research examining the interpersonal issues found within BPD from an understanding of the disposition or propensity to trust as it relates to specified styles of the attachment paradigm. Therefore, this study examined how the trait of trust propensity may be associated with style of attachment in 30 females with BPD clinical sample from a private practice within the mid-southern United States. The chapter addressed the introduction to the study, the prevalence of BPD, the symptoms and severity of BPD, professional adherence, the rationale, purpose, significance, delimitations, and limitations of the study, trust as a prerequisite for therapy, the research questions, and the definitions of key terms. The following chapters will cover the review of the literature, methodology, results, and implications for further research.

CHAPTER TWO: LITERATURE REVIEW

The following chapter examines relevant literature pertaining to Borderline Personality Disorder (BPD). The review of literature is divided into main sections and related subsections, including BPD, interpersonal impairment, attachment theory, and trust. This examination of the literature will illustrate the background research on BPD while identifying the need for further understanding of interpersonal impairments through a trait theory perspective.

Trait Theory

Personality is an individual pattern of thoughts, feelings, and actions (Baum, Newman, Weinman, West & McManus, 1997). Trait theory is an approach to the study of human personality within the social sciences. Seminal trait theorist, Gordon Allport, in 1937 conducted studies that measured traits or patterns of behavior, cognitions, and feelings displayed within an individual. Accordingly, this perspective posits that traits differ from states in that they are a permanent fixture that remains stable over time, with substantial impacts on behaviors (Kassin, 2003). Personality disorders are characterized by an enduring pattern of behavior that results in disrupted thoughts, feelings, and interpersonal functioning, causing impairment in daily functioning (APA, 2013). Widiger and Weissman (1991) concluded that 50% of all inpatient psychiatric patients qualify for a personality disorder, and of those 76% are females with BPD. These researchers' findings were debated due to the lack of a validated diagnostic tool for precisely determining BPD within individuals (Widiger & Weissman, 1991). Conversely, recent findings conflict with previously held notions, as recent evidence suggests minimal gender differences over lifetime incidences of BPD, occurring equally in men and women at 6% (Grant et al., 2008). These findings indicate that females are more likely than males to receive disproportionately the diagnosis of Borderline Personality Disorder. The following correlational analysis will examine the association between females with BPD and their attachment style as it

relates to trust propensity. This study's aim is to provide a better understanding of pervasive defining characteristics of interpersonal impairment from a trait theory perspective.

Borderline Personality Disorder

According to the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) (APA, 2013), Borderline Personality Disorder (BPD) is seen by early adulthood and is characterized by a distorted view of relationships, a pattern of a variety of highly impulsive behaviors in an attempt to regulate emotions, frequent emotional instability, intense fears of desertion, thoughts of ending ones' life, intense uncontrollable rage, and interpersonal relationship disturbance (APA, 2013). BPD is characterized by a persistent display of irregularity in emotions, cognitions, behaviors, and interpersonal relations (APA, 2013; Linehan, 1993). For individuals to receive a diagnosis of BPD, five or more of the nine diagnostic criteria listed within the DSM-5 (APA, 2013) are prevalent for a persistent period. These specific diagnostic criteria as outlined in the DSM-5 (APA, 2013) are as follows:

> A pervasive pattern of instability of interpersonal relationships, self-image, and affects, and marked impulsivity, beginning by early adulthood and present in a variety of contexts, as indicated by five (or more) of the following:
> 1. Frantic efforts to avoid real or imagined abandonment. (**Note**: Do not include suicidal or self-mutilating behavior covered in Criterion 5.)
> 2. A pattern of unstable and intense interpersonal relationships characterized by alternating between extremes of idealization and devaluation.
> 3. Identity disturbance: markedly and persistently unstable self-image or sense of self.
> 4. Impulsivity in at least two areas that are potentially self-damaging (e.g., spending, sex, substance abuse, reckless driving, binge eating). (**Note**: Do not include suicidal or self-mutilating behavior covered in Criterion 5.)
> 5. Recurrent suicidal behavior, gestures, or threats, or self-mutilating behavior.
> 6. Affective instability due to marked reactivity of mood. (e.g., intense episodic dysphoria, irritability, or anxiety usually lasting a few hours and only rarely more than a few days).
> 7. Chronic feelings of emptiness.
> 8. Inappropriate, intense anger or difficulty controlling anger. (e.g. frequent displays of temper, constant anger, recurrent physical fights).
> 9. Transient, stress-related paranoid ideation or severe dissociative symptoms. (APA, 2013, p. 663).

Linehan (1993) postulated that methods of controlling these intense emotions for individuals with BPD are often manifested through behaviors including self-harm, substance abuse, bingeing and/or purging of food, disassociation, explosive anger, and other high-risk and impulsive behaviors. Notably, these behavioral manifestations of BPD at surface value appear to include such other classes of behavioral mental disorders as mood disorders, anxiety-related trauma disorders, eating disorders, impulse control disorder, and at times psychosis disorders (Frances & Widiger, 2012). As such, research identified an elevated rate of comorbidity and misdiagnosis in individuals with borderline personality disorder and other co-existing mood disorders (Frances & Widiger, 2012; Skodol et al., 2002b). BPD has wide-ranging symptoms and behavioral manifestations which can be elusive to many mental health providers and individuals that experience the disorder without receiving an accurate diagnosis and/or treatment.

Borderline Personality Disorder History

In 1938, psychoanalyst Adolph Stern described clinical criteria most compatible with modern-day Borderline Personality Disorder (BPD) (Stern, 1938). Researcher Roy Grinker published the first findings on participants with "borderline syndrome" in 1968, and psychoanalyst Otto Kernburg (1976) suggested that mental pathology was influenced by three personality constructs including: psychotic, neurotic, and borderline personality. Grinker's research alluded that Borderline Personality Disorder was a syndrome without qualifying for complete psychosis or neurosis, but displaying patterns of both rooted in an ambivalent and fearful attachment style (Bowlby, 1969). In 1975, John Gunderson and Margraret Singer published diagnostically valid measures for identifying Borderline Personality Disorder as well as other pivotal findings. Thereafter, Borderline Personality Disorder was recognized in the Diagnostic Statistical Manual of Mental Disorder-III (DSM-III) (APA, 1980). In 1993, Marsha Linehan introduced one of the first empirically based treatments specifically for the treatment of

individuals with BPD, called Cognitive Behavioral Therapy for Borderline Personality Disorder, also referred to as Dialectical Behavioral Therapy (Linehan, 1993). During 2014 Marsha Linehan released the second edition of DBT® skills training manual with the original four modules including: mindfulness, emotion regulation, distress tolerance, and interpersonal effectiveness.

Borderline Personality Disorder Stigma

Borderline Personality Disorder (BPD) has been notorious for having a pejorative meaning in mental health care. Some of the negative stigma that surrounds BPD includes perceptions of the disorder being unresponsive to mental health treatment, with chronic and unchanging issues that impact more females than males. Due to the extreme natures of individuals with BPD, clinicians have been found to avoid clients with this diagnosis due to the interpersonal relational impairment associated with the disorder (Chafos & Economou, 2014). Mental health professionals stigmatize patients with BPD more frequently than the general population (Latalova, Ociskova, Prasko, Sedlackova, & Kamaradova, 2015). Additionally, the general population have been found to hold negative stigmas toward individuals diagnosed with this disorder, which may worsen the commitment and maintenance of the therapeutic relationship (Latalova et al., 2015).

Often, mental health providers' negative stigma about BPD has been the result of broad, elusive, and often overlapping comorbidity with such diagnoses as Major Depression (Frances & Widiger, 2012), Post-Traumatic Stress Disorder (PTSD) (McLean & Gallop, 2003), Bipolar Disorder (Henry, Mitropoulou, New, Koenigsberg, Silverman, & Siever, 2001), Impulse Control Disorder and Attention Deficit Disorder (ADD) (Philipsen, 2006). The complex nature of BPD has received stigmatization as a receptacle diagnosis for those unresponsive to traditional treatments and the overlapping comorbid disorders (Frances & Widiger, 2012; Skodol et al., 2002b). In addition, other research about the mental health field reports on the stigmatization of

individuals with BPD: clinicians who suggest that there is a conviction of incurability related to this disorder, which is manipulative in nature (Linehan, 1993). This illustrates the overall ignorance that drives stigma, and the impact of how countertransference occurs, while pivotal underlying associated traits of these individuals are disregarded.

Biosocial Theory

As seen in Figure 1, the biosocial model is a dynamic model between biological, social and environmental aspects found to be prevalent with individuals with BPD. A logistical regression study revealed risk factors for the development of BPD to include a family history of psychiatric disorders (genetic predisposition / biology), childhood sexual abuse (traumatic experience / social), parental separation (invalidating environment / social), and dysfunctional parental styles (invalidating environment / social) (Bandelow et al., 2005). These findings are consistent with the predominant biosocial model theory for understanding underlying factors that contribute to BPD. Linehan (1993) explained many of the underpinnings found in BPD as follows: "The major premise is that BPD is primarily a dysfunction of the emotion regulation system, resulting from biological irregularities combined with certain dysfunctional environments, as well as from their interaction and transaction over time" (p. 42). As one can observe, much of the interaction within this model is synergistic in nature and each aspect becomes more potent when combined with the others.

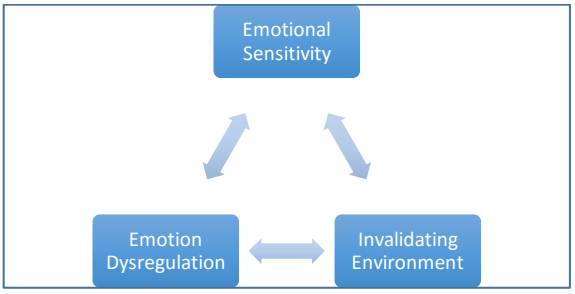

Figure 1
Modified Biosocial Theory Model (Linehan. 1993).

Biological

According to Linehan (1993), the two biological causes for BPD are affective sensitivity and dysregulation. Therefore, suggesting a biological predisposition is a source of interpersonal impairment attributed to the emotional dysregulation seen within individuals with BPD. These emotional dysregulation tendencies have been tied to abnormalities within the brain's adrenergic and cholinergic systems (Gurvits, Koenigsberg & Siever, 2000) and greater left amygdala activation in reaction to the facial expressions of emotions compared to control subjects (Donegan et al., 2003). Additional abnormalities have been suggested within the dopaminergic systems, causing many of the transient psychotic symptoms (Stone, 1988). Anecdotal research has suggested that individuals with BPD experience a lack of dopamine production (Friedel, 2004). Therefore, the impulsive behavioral coping (i.e. self-harm, excessive spending, reckless driving, high risk sexual behavior, and substance abuse) found within BPD is a means to try to increase dopamine production within a deficient system (Friedel, 2004). Additional support for this idea is that abnormalities have been suggested to occur within the central nervous system to include the serotonergic functioning underlying impulsive and aggressive behaviors (Stone, 1988).

Other findings suggest that, compared to men, women are generally more supportive and attentive of one another in their relationships with close friends (Caldwell & Peplau, 1982). Correspondingly, females are more likely to secrete oxytocin, a hormone released by the pituitary gland associated with nurturing maternal behaviors and attachment, during stressful situations. Notably, oxytocin is involved in attachment to caregivers and prosocial behavior that regulates stress responses within social situations (Schmahl et al., 2014). Congruently, decreased peripheral oxytocin concentrations in females with BPD was found to be negatively correlated

with severity of early traumatic experiences (Bartz et al., 2010).

Socio-Environmental

Research has pointed to the role of the family social environment and experiences as a source of significant influence when it comes to the development of BPD (Fruzzetti, Shenk, & Hoffman, 2005; Linehan, 1993). Specifically, individuals from families perceived as invalidating, tumultuous, and critical without positive, supportive, empathetic interactions were more likely to develop BPD compared to healthy controls (Fruzzetti et al., 2005). Furthermore, another study examined the relationships between biological predispositions, social environments, and emotion regulation as they related to BPD. Linehan (1993) described the impact of the social environment as highly influential for the development of BPD as follows:

> A number of empirical literature reviews (Gunderson & Zanarini, 1989) have concluded that borderline patients experience more childhood loss of a parent through divorce or death, higher rates of early childhood separation from primary caretakers, and more physical abuse and neglect than do other types of psychiatric patients. (p. 98)

One study revealed that thought suppression partially mediated the relationship of negative emotion intensity, impulsivity, and perceived familial disapproval (Cheavens et al., 2005).

Trauma

Linehan (1993) asserted that childhood sexual trauma was the most invalidating event one could experience. Researchers Lewis and Christopher (1989), determined a robust correlation of childhood trauma and BPD. These various experiences of trauma the researchers, (Lewis & Christopher, 1989), identified to include were as follows: 62% witnessing domestic violence, 71% experiencing physical abuse, and 68% experiencing sexual abuse. These researchers concluded that significantly more subjects with BPD, 81%, provided histories of the direct or indirect experiences of trauma compared to individuals with no BPD diagnosis, further supporting the influence of social environmental factors that contributing to the development of

BPD (Lewis & Christopher, 1989). Other similar studies yielded congruent findings that determined significantly higher rates of childhood abuse in individuals with BPD compared to healthy controls (Bandelow et al., 2005). Specifically, participants with BPD reported increased rates of sexual abuse, violence, separation from parents, childhood illness, and negative opinions of parents (Bandelow et al., 2005; Salzman, 1996). "Most striking is the strong relationship of BPD with histories of childhood sexual abuse" (Linehan, 1993, p. 89).

Other researchers investigated differences in females with BPD compared to females with BPD and Post-Traumatic Stress Disorder (PTSD). Lange, Irle, Weniger, and Sachsse (2009) discovered through magnetic resonance imagining (MRI), a significant reduction in amygdala and hippocampus sizes in females reporting a history of trauma with BPD compared to females with BPD only and compared to healthy controls. Both BPD groups displayed a significantly atrophied brain structure compared to healthy controls (Lange et. al., 2009). These findings suggest foremost that BPD can impact the physiological structure of the brain negatively and, furthermore, trauma may have an even greater impact on the physiological structure of the brain for females with BPD in conjunction with PTSD. Oxytocin is involved in attachment and prosocial behaviors and regulates stress responses within social situations (Schmahl et al., 2014). Correspondingly, there are decreased peripheral oxytocin concentrations in females with BPD, which was found to be negatively correlated with the severity of early traumatic experiences (Bartz et al., 2010). There have been robust meta-analytic data suggesting a strong correlation between individuals with BPD and sexual trauma in childhood (Fossati, Madeddu & Maffei, 1999). Bertsch, Schmidinger, Neumann, and Herpertz (2013) altered the activity of the prosocial neuropeptide oxytocin in individuals with BPD who experienced childhood trauma after controlling for female hormone levels. "PTSD, dissociation, somatization, and affective

dysregulation represent a spectrum of adaptations to trauma" within individuals with BPD (Van der Kolk, Pelcovitz, Roth & Mandel, 1996, p. 86). Linehan (1993) argued that highly traumatic and invalidating environmental experiences play a significant role in the development of the emotion dysregulation and interpersonal impairment found within individuals with BPD.

BPD Interpersonal Impairment

A persistent pattern of turbulent and unsteady interpersonal relationships is one distinctive feature of BPD. Notably, researchers concur that individuals with BPD tend to experience intense relationships coupled with desperate ploys in an attempt to avoid perceived abandonment (Bartz et al., 2010). Paradoxically, these methods to avoid rejection are coupled with fears of others getting too close, resulting in inadvertently pushing others away (Gunderson, 2007). Often this cycle is followed by an intense anger response aimed toward others that abandoned or unknowingly or inadvertently slighted the individual with BPD. One potential theory contributing this dysfunctional interpersonal cycle could be the evidence that individuals with BPD have a greater sensitivity to rejection and a tendency to evaluate neutral facial expressions more as rejecting compared to individuals without BPD (Miano, Fertuck, Arntz & Stanley, 2013). These interpersonal struggles have been witnessed most readily in established relationships, but they are also seen in newly formed relationships.

A factor analytic study described three sectors of Borderline Personality Disorder psychopathology as affective, behavioral, and interpersonal (Sanislow et al., 2002). The first two of these sectors, affective instability and behavioral impulsivity, have been conceptualized as main phenotypes (APA, 2013). Borderline Personality Disorder's sector of psychopathology is disturbed relationships, traditionally conceptualized as influenced by environmental factors (Gunderson & Lyons-Ruth, 2008). Therefore, fully understanding these interpersonal

relationship characteristics is crucial to such clinical issues as regressions, boundary issues, and countertransference reactions from a traits theory perspective.

Misperception

A significant amount of research has concluded that there is a robust association between misperception and individuals with BPD. Individuals with BPD have been identified to distort representations of themselves and others (Agrawal, Gunderson, Holmes, & Lyons-Ruth, 2004). These distortions conclude that within social situations, individuals with BPD frequently experience an undying sense of loneliness and disconnection from others (Bender & Skodol, 2007). This misperception may appropriately correspond to criteria number one within the DSM-V for BPD as follows: "Frantic efforts to avoid real or imagined abandonment" (APA, 2013, p.663). One study compared the interpersonal and emotional experiences of social interactions in those with BPD compared to those with other personality disorders and healthy controls (Stepp, Pilkonis, Yaggi, Morse & Feske, 2009), revealing that individuals with BPD experienced fewer interpersonal interactions than other personality disorder types, and their social interactions consisted of interpersonal uncertainty, disputes, sorrow, and emptiness (Stepp et al., 2009).

Another study revealed that those with BPD are described as more submissive and quarrelsome compared to controls (Russell, Moskowitz, Zuroff, Sookman & Paris, 2007). Clifton, Pilkonis, and McCarty (2007) examined the composition and quality of social networks of individuals with BPD compared to those without a personality disorder and found that those with BPD were no longer speaking to 31%, compared to 9%, of the people within their social network. Additionally, they reported greater overall conflict, lower levels of trust for close members of their social support network, and their social network included more former romantic partners (Clifton et al., 2007).

Splitting

Splitting is characterized by polarization on a good-bad dimension: the evaluated object is one-dimensional and either viewed as totally good or totally bad (Muller, 1992). This tendency is directly related to criteria number two of the DSM-5 as follows: "A pattern of unstable and intense interpersonal relationships characterized by alternating between extremes of idealization and devaluation" (p. 663). According to Kernberg (1976), splitting is a defense mechanism that serves to protect one from the destruction of one's good self and good other representations by aggressive impulses. Muller (1992) elaborated that when splitting occurs, the evaluations of others are categorized by extreme cognitions as an emotional dichotomy of either good or bad, one way or the other. However, cognitive theories suggest that this dichotomous thinking is prominent in BPD as an information-processing characteristic related to schemes formed within early development (Arntz & Veen, 2001). Therefore, splitting likely developed in association with an attachment style reaction that formed during extreme environmental experiences involving caregivers.

Mentalization Impairment

Mentalization is the ability to recognize the feelings and intentions of the self and others (Gunderson, 2007). Individuals with BPD have a diminished ability to mentalize, which can contribute to interpersonal impairment. Based on observations of early mother-child interactions, an inability to mentalize, along with a reemergence of more primitive mental states, is a core psychological deficit of patients with BPD (Gunderson, 2007). Fonagy, Luyten, and Strathearn (2011) affirmed that individuals without secure attachments can experience significant challenges in mentalization capabilities. Therefore, individuals with BPD are often perceived by others as dramatic, erratic, attention-seeking, and manipulative. However, Linehan (1993) will argue that individuals with BPD are not purposefully manipulative. This argument seems to

contradict the fundamental definition for personality disorders proposed by the DSM-5 (APA, 2013) as:

> A classification of mental disorder characterized by enduring maladaptive patterns of behavior, cognition, and inner experience that are associated with significant suffering or impairment in daily functioning. This pattern is exhibited across many contexts and deviating markedly from those accepted by the individual's culture. (p. 646)

Researchers Carlson and Oltmanns (2015) examined the relationship between meta perceptions and actual impressions and found that individuals with BPD feel less understood by those they are in close relationships with. For most people, feeling understood fosters identity coherence and relationship quality (Kwang & Swann, 2010), whereas a negative self meta bias leads to poor relationship quality (Lemay & Dudley, 2009). "Accurate and solid interpersonal relationships and the ability to direct attention voluntarily, contribute to the emergence of a sound behavioral system that underpins mature attachment relationships" (Fonagy et al., 2011, p. 49). As such, the impaired ability to mentalize has been found to be related to insecure styles of attachment and a tendency to compensate for this impairment by a hyperactive attachment system reaction (Fonagy et al., 2011), which ultimately frequently repels others from these individuals.

Dissociation

Criterion number nine within the DSM-V for BPD is dissociation can be found as "Transient, stress-related paranoid ideation or severe dissociative symptoms" (APA, 2013, p.663). Dell (2006) found that dissociative experiences involve detachment from reality, ranging from mild daydreaming to a severe split from reality as found within psychotic episodes. The phenomena of dissociation have been historically correlated with a history of physical, sexual, and/or emotional traumas as a child (Mulder, Beautrais, Joyce & Fergusson, 1998). These researchers randomly selected 1,028 individuals, of which 6.3% reported experiencing

dissociation, and found that childhood physical abuse and psychiatric disorder were more associated to dissociation episodes than childhood sexual abuse (Mulder et al., 1998). Moreover, Stiglmayr et. al. (2008) found an association between dissociative symptoms and individuals with BPD and times of increased stress compared to controls and alternative psychiatric disorders. Another study examined the experience of dissociation for individuals with BPD and found 32% of individuals experienced low levels of dissociation, 42% experienced moderate levels, and 26% reported a high level compared to control groups (Zanarini, Ruser, Frankenburg & Hennen, 2000).

Emotional Dysregulation Theory

The emotion dysregulation aspect of BPD is seen through the DSM-V criteria number six as follows: "Affective instability due to marked reactivity of mood" (APA, 2013, p.663). Donegan et al. (2003) and Putnam and Silk (2005), described an all-encompassing model to explain the impact of differences in neural anatomy, environmental stressors, parental effectiveness, and genetics play how individuals with BPD experience the dramatic shifts in emotions which impact moods for these individuals. Researchers Gratz, Rosenthal, Tull, Lejuez, and Gunderson (2006) examined this predominate theory, emotion dysregulation, behind the pathology of Borderline Personality Disorder through an experimental comparative analysis. These researchers compared individuals (n=18) with BPD to individuals (n= 17) without BPD and examined their ability to function when emotionally stressed. As hypothesized, the researchers determined that individuals with BPD were less willing and able to tolerate intense emotional conditions to accomplish objectives compared to the healthy control group (Gratz, et al, 2006). Furthermore, researchers Carpenter and Trull (2013) examined the predominate emotion regulation theory more extensively by reducing it into four categories. These categories

included emotion sensitivity, increased negative moods with volatility, inability to change or control moods and emotions, and various negative coping mechanisms (Carpenter & Trull, 2013). The researchers determined the need for further research in identifying the specific components contributing to the underlying emotion dysregulation factor within individuals with BPD (2013). According to Schlmahl, et al., (2014), "Most of the interpersonal problems of BPD patients (such as rejection sensitivity, difficulties in cooperation, and hostile behavior) can be seen as being driven by dysfunctional emotion processing" (p.2).

Attachment Theory

Bowlby first introduced attachment theory to the British Psychoanalytical Society in 1957, and it received criticism, being dubbed an instincts theory (Ainsworth, Blehar & Waters, 1978). Later, Bowlby (1980) refined the attachment theory model into a more advanced understanding, which evolved into one of our most prominent approaches to understanding interpersonal relationships. Bowlby (1973) asserted that one's style of attachment is a constant trait of personality that regulates "any form of behavior that results in a person attaining or retaining proximity to some other differentiated and preferred individual, usually perceived as stronger and /or wiser" (p. 292). These early survival behaviors influence thoughts, feelings, and behaviors throughout life and how individuals relate (Bowlby, 1982). Conversely, Waters, Corcoran, and Anafarta (2005) argued that attachment theory addresses how humans respond within relationships when distressed or separated from close ones. Attachment formation is bidirectional in that the receiver of attachment can mirror a series of states from the caregiver that become traits through mirror neurons that serve to aid in interpreting others' behaviors and intentions as well and producing behavior (Fonagy, Luyten, & Strathearn, 2011). Specific evidence for this trait includes the identification of an undersized allele of the 5-HT gene known to be associated with caregiving abilities (Barry, Kochanska, & Philibert, 2008). Fonagy and

Bateman (2006, 2008) speculated that the hyperactivity or compensatory reaction of the attachment system seen within individuals with BPD is potentially linked to traumatic experiences contributing to the inability to mentalize, which can result in emotional irregularities and impair evaluations of social trust relevant to interpersonal impairments. Attachment theory speculates that primary motivational systems are the leading approach to conceptualizing and examining close interpersonal relationships (Fiske et al., 2010).

Infant Attachment

Depending upon one's biology, social environment, and experiences, attachment styles vary (Sroufe, 1988). Children require early attachment within the first two years of life to at least one primary caregiver for the development of healthy emotional and social abilities (Hazan & Shaver, 1994). According to Bowlby (1969), the manner in which individuals attach or connect with each other, also referred to as attachment style, is based upon early formative relationships with caregivers, siblings, and family members. Bowlby (1980) stated that the activation of the attachment system exists to ensure the survival of a species and to regulate safety and protection. Infant attachment theory contends that individuals are born into life with this advanced neurobiological system organized in a manner to aid in survival by adjusting to the social environment into which an individual is born to get wants and needs met from the environment (Bowlby, 1979). These attachment systems, or styles of attachment, regulate the way in which children obtain their needs, receive affection, and demonstrate behavior facilitating protection and safety (Bowlby, 1980). The central logic behind the classical infant attachment theory is that caregivers who are available and responsive to their infants instill a sense of safety in the relationship with their infants, who are new to the world (Bowlby, 1979). Once these needs are met in a consistent fashion, the infant is assured that the caregiver is reliable and they can and will get their wants and needs met. Thus, depending upon the child's needs and how the

caregiver responds, the attachment system modifies safety through attempting to maintain attachment or closeness to the caregiver (Bowlby, 1982). Ultimately, once formed, these styles of attachment are evident within childhood and are exhibited within different relationships throughout adulthood. A secondary component of the attachment system is indirect education through modeling to the child how to provide and receive love and affection as an adult (Levy & Orlans, 2014). As described in Table 2., infants' prevalence of attachment styles manifests themselves differently through evident behaviors.

Table 2
Infant Attachment (Sinha & Sharan, 2007)

Attachment Style	Relational Orientation	Frequency
Secure	Greet mother and seek proximity and/or contact and return to play.	50%
Dismissive	Avoid proximity with mother.	13%
Fearful/ Avoidant	Approach mother and avoid mother, wavering need for closeness and distance.	12%
Preoccupied	Role confusion and disorganization.	25%

Adult Attachments

Bowlby (1969) mainly devoted his focus to understanding early childhood attachment style formation. However, researchers Fraley and Shaver (2000) and Mikuilincer and Shaver (2003) observed these patterns to persist in different forms throughout the human lifecycle past childhood. Adult attachments can be seen within such behaviors as seeking closeness to partners or proximity seeking, experiencing distress during separation and disconnection, and connecting with alternative relationships during stressful times or for protection (Weiss, 1991). Additionally, these styles of attachment can influence emotional reactions within relationships, which can, in turn, impact cognitions (Bowlby, 1980). Bowlby (1979) explained:

> Many of the most intense emotions arise during the formation, maintenance, disruption, and renewal of attachments. The formation is described as falling in love, maintaining a bond as loving someone, and losing a partner as grieving over someone. Similarly, threat of loss arouses anxiety and actual loss gives rise to sorrow; whilst each of these situations is likely to arouse anger. The unchallenged maintenance of a bond is experienced as a source of security and the renewal of a bond as a source of joy. (p. 130)

Logically, relationships can be an emotional experience that may serve to either decrease suffering within individuals with BPD or increase negative emotions to intolerable levels. Interpersonal issues such as those stemming from a disturbed sense of self, impulsive behavior, breakups, arguments, and attempts to avoid abandonment are central to the pervasiveness and severity of BPD (Zanarini et al., 2011) and are major contributing factors for suicidal behavior, including self-harm, attempts at suicide, and completed suicide (Brodsky et al., 2006). Therefore, further examination of possible underlying interpersonal factors of this disorder is warranted.

Fraley and Davis (1997) examined 237 adults in college for a normative understanding of attachment theory in adults and found that 60% of the participants were in the process of transferring attachment-related functions from parents to peers. Factors such as trust, intimate contact, and reliability were found to be positively associated with the development of attachment in adult relationships (Fraley & Davis, 1997). As seen in Figure 2, Horowitz and Strack (2010), identify the contributing factors to adult attachment styles.

Understandings of how early attachment formations are transferred to romantic attachment partners was generally unaddressed prior to the pivotal research of Ainsworth (1978) and Shaver and Hazan (1988). These researchers adopted the works of Bowlby's theory of attachment to better understand how adult romantic relationships work. Some of these included proximity seeking, safety and behavioral and emotional similarities such as frequent eye contact and physical touch. Additionally, infant-caregiver bonds have a highly asymmetrical pattern of caregiving, whereas romantic love involves reciprocal caregiving.

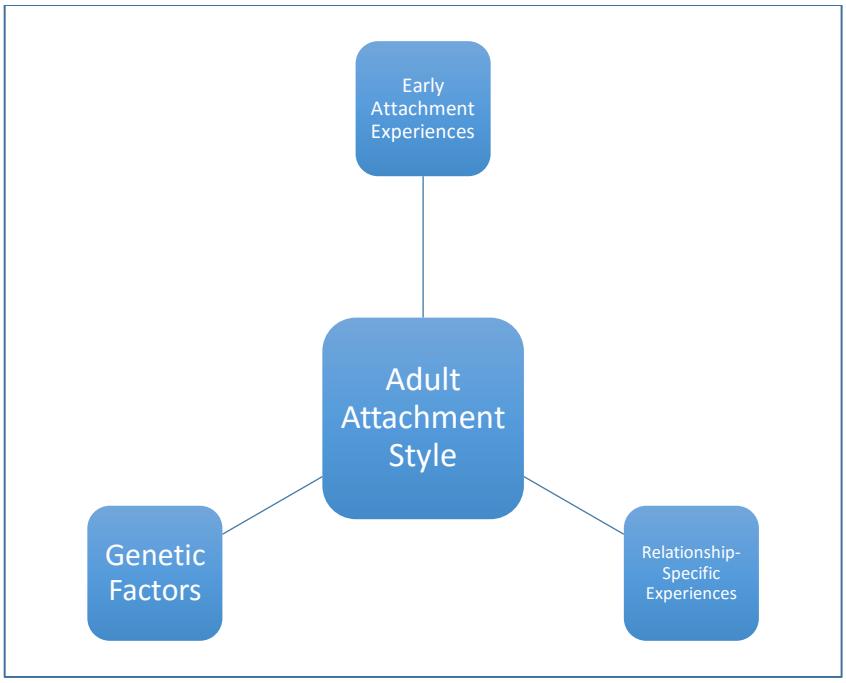

Figure 3
A Modified Adult Attachment Style Model (Horowitz & Strack, 2010).

Secure Attachment

Bowlby (1973) defined secure relationships in infancy as those interactions in which parents are responsive to infants' distress, assist infants in regulating tension, and bring relief. Children who received a consistent pattern of caring from healthy parenting, void of abusive relations, are more likely to display a secure style of attachment per Bowlby (1982). It is estimated that 60% of American infants are secure in their attachment style (Campos & Barrett, 1984). The child feels secure enough to explore surroundings with the knowledge that his or her caregiver will be present when needed. Secure infants exhibit a general sense of overall wellbeing as evidenced by their ability to be easily comforted and rest, while maintaining a desire to explore and understand new environments (Shaver & Hazan, 1988).

Therefore, making connections comes easily for infants who exhibit a secure attachment style, without fear of rejection, and the baby feels comfortable with being vulnerable to others. Notably, oxytocin has been found to play a significant role in secure attachment formation

(Schmahl et al., 2014) and aids in producing a sense of trust found to be important to healthy attachment. “Trust is the aspect of attachment that is considered by a number of us to be one of its key evolutionarily conserved facets in humans” (Fonagy et al., 2011, p. 52). Another comprehensive study using a large sample found that participants who endorsed a secure style of attachment reported perceiving a higher level of emotional support from important figures within their lives and reported seeking more emotional support than individuals with avoidant or preoccupied styles of attachment (Agrawal, Gunderson, Holmes & Lyons-Ruth, 2004). As adults, individuals with a secure style of attachment are characterized by low anxiety and a low avoidant style (Brennan et al., 1998).

Dismissive Insecure Attachment

Bowlby (1982) postulated that individuals who display a dismissive insecure style of attachment did not get their needs met by others during childhood; therefore, they attempt to be self-reliant to avoid the pain of potential denials. According to Shaver and Hazan (1988), 25% of infants display characteristics similar to this style, which can be attributed to caregivers who were overall insensitive and rejecting of the infant. Individuals who display this style of attachment are comfortable without close, emotional relationships. Independence and remaining self-sufficient is important for these individuals, who prefer to not rely upon others. Individuals that have been found to display a dismissive avoidant type were most related to Schizoid Personality Disorder (Sinha & Sharan, 2007). Additional factor analysis research revealed individuals with BPD displaying the dismissive style of attachment would exhibit the BPD criteria of explosive inappropriate anger (Levy et al., 2005).

Fearful/Avoidant Insecure Attachment

The fearful/avoidant insecure style of attachment is reportedly found within 15% of infants, attributed to caregivers also anxious and inconsistent with delivering needs to the child (Shaver & Hazan, 1988). Oftentimes, inconsistent patterns of caring in the form of relational trauma such as enmeshment, emotional abuse, proximal neglect, emotional manipulation, sexual abuse, physical abuse, or many other forms of abusive relations, may set the stage for an anxious/fearful insecure style of attachment (Kirkpatrick & Hazan, 1994). Children internalize inconsistent patterns of care during the initial formation of an anxious and fearful attachment system and experience negative emotions to become associated with an intense need to avoid emotional reactions (Bowlby, 1973). Behavioral manifestations for this style of attachment take the form of the infant's inability to soothe tearful episodes with caregiver close and/or far in proximity, inability to relax, and fearfully anxious inhibited lack of desire to explore environments (Brennan et al., 1998). Brennan et al. (1998) found individuals with Obsessive Compulsive Personality Disorder were more typically associated with fearful attachment. Other research findings point to BPD seemingly corresponding to fearful attachment patterns as evidenced by relational avoidance, inability to endure loneliness, and sensitivity to social environments (Choi-Kain et al., 2009; Fonagy, Luyten & Strathearn, 2011; Gunderson & Lyons-Ruth, 2008). As adults, these individuals are uncomfortable allowing others to get close but, contrarily, desire closeness within relationships. Other findings suggested participants with fearful attachment were found to exhibit a tendency to evaluate others' traits more negatively compared to those without that attachment style (Horppu & Lkonen-Varila, 2001). Furthermore, Levy et al. (2005) found this style of attachment to be associated with more prevalent BPD symptomology, including identity disturbance and feelings of chronic emptiness.

Preoccupied Insecure Attachment

Brennan, Clark, and Shaver (1998) determined with a large nonclinical sample of individuals that those who subscribed to a preoccupied insecure style of attachment were three to four times as likely to have a personality disorder compared to those with a secure style of attachment (Brennan et al., 1998). Incongruent with previous findings, Sinha and Sharan (2007) concluded that individuals with BPD who are concerned about abandonment and getting too attached seemed to best fit the preoccupied style of attachment toward their parents and romantic relationships. Additionally, narcissistic and antisocial disorder sufferers were found to correspond with the preoccupied style of attachment (Sinha & Sharan, 2007). Additional factor analysis research illustrated individuals with BPD that display this style of attachment to be associated with more prevalent BPD symptomology, including distress over abandonment (Levy et al., 2005). Bowlby theorized that individuals who exhibit this style of attachment served as parent figures to their parents while children, thus contributing to incomplete psycho-developmental need fulfillment. Individuals with this style of attachment find it challenging without close relationships and are concerned that others don't value them as much as they value others (Sinha & Sharan, 2007).

Table 4.
Adult attachment style, relational orientation, and pathology (Levy et. al., 2005).

Attachment Style	Relational Orientation	Pathology	Frequently Associated Personality Disorders
Secure	I'm OK you're OK.	Consistent pattern of predictable affection	
Dismissive	You're not OK, I'm OK.	Consistent negative relational trauma	Narcissistic, Schizoid
Fearful/Avoidant	I'm not Ok, you're not OK.	Inconsistent unpredictable pattern of caregiving	Antisocial, Borderline
Preoccupied	I'm not OK, You're OK.	Caring for caregivers more than caregivers cared for individual. The parenting child	Borderline, Dependent

Researchers Agrawal et al. (2004) reviewed 13 empirical studies that found individuals with BPD exhibited a robust association with insecure attachment styles. The types of attachment most characteristic of BPD included dismissive, preoccupied, and fearful, along with a desire for connection but worry about dependency and potential denial (Agrawal et al., 2004). These social tendencies are coupled with a fearful style of attachment (Sinha & Sharan, 2007), contributing to a sense of impending abandonment. The relational style that individuals with BPD exhibit is characterized within the DSM-V (APA, 2013) criteria as intense and unstable, marked further by fears of abandonment vacillating between idealization and devaluation. These characteristic tendencies have provided the best discriminators for identifying BPD within relationships (Gunderson, 2007). Additionally, preoccupied styles of attachment are indicated by demands for attention and need for proximity alternating with the unresolved, which is indicated by confusion or fearfulness of commitment (Bowlby, 1969; Ainsworth, Blear, Waters & Wall, 1978). Relationship functioning can be seen in Table 4, which illustrates the way attachment interactional qualities (including facilitative disclosers or decisions to trust, emotional expressiveness, and responses to conflict) impact relationship satisfaction. This graph is supported by a sizable longitudinal study examining adult attachment styles and relationships over a 4-year period (Kirkpatrick & Hazan, 1994). The findings revealed attachment style to be a significant predictor of relationship status and overall satisfaction. Insecure respondents (e.g. fearful, preoccupied, dismissive) reported one or more break ups after the 4-year period (1994).

Trust

"Interpersonal trust is quite possibly the most pivotal, least well-defined, and least directly measured concept affecting individuals and organizations that must successfully maneuver complex and dynamic human-centric environments" (Borum, 2010, p. 2). "To date,

the most frequent approach to [measuring trust] is to ask respondents how much they trust most people" (Freitag & Bauer, 2016, p. 2). Consequently, one can see that trust is vital for relationships to be effective within virtually all aspects of life (Colquitt, Scott & LePine, 2007). Trust has been defined as a prediction about the future as well as an understanding of the past (Rempel, Holmes & Zanna, 1985). Conflicting agreements on the exact definition of trust and methods for measurement have led to mixed findings and inhibited a complete understanding of the concept (e.g., Bigley & Pearce, 1998). Researchers have provided a widely accepted psychological definition of trust, due to its broad generalizability, as follows: "A psychological state comprising the intention to accept vulnerability based upon the positive expectation of the intentions or behavior of another" (Rousseau, Sitkin, Burt & Camerer, 1998, p. 395). Other researchers similarly defined trust as a social construct phenomenon that occurs when an individual can be vulnerable to another while resting in the confidence that both the trustor and the trustee will demonstrate trustworthiness in a reciprocal manner (Mayer et al., 1995). Therefore, trust is a complex interpersonal social construct that greatly influences one's behaviors and expectations (Zaheer, McEvily & Perrone, 1998).

Development of Trust

Two opposing theories exist on how interpersonal trust is initiated (Freitag & Bauer, 2016). The initial line of thought is that trust is a fluid construct that is based on an individual's appraisal of environmental and related social cues rooted in experiences (Hardin, 2002). The development of this social environmental appraisal-based trust includes the following three stages: predictability, dependability, and consistency (Rempel, Holmes & Zanna, 1985). Researchers Wieselquist, Rusbult, Foster, and Agnew (1999) stated that predictability is one of the requirements for the development or cue to trust and is dependent on the consistency of an

individual's observable behavior. Ganesan and Hess (1997) identified credibility in the form of kind intentions to be another cue for the development of trust. Furthermore, dependability was found to be a requirement and is defined as the degree to which the partner is judged to be reliable and honest, as the following exemplifies, "The more reliable and honest the partner is perceived to be, the more he or she can be regarded as trustworthy" (Rusbult et al., 2000, p. 442). As researchers McKnight and Chervany (2001) highlighted, faith is the third stage in the development of trust, which moves beyond the evidence of trust and represents a conviction that the partner can be relied upon to be responsive to one's needs and behave in a caring manner, now and in the future. Furthermore, faith in humanity is the concept of the global view of underlying expectations and beliefs toward nonspecific other people and human nature (McKnight & Chervany, 2001). The stages of trust are not mutually exclusive; each stage is necessary for strong feelings of trust to develop. Trust is a paradoxical interpersonal phenomenon that is partially grounded in cues that provide evidence of one's value to the other individual, but it is also independent of such cues, requiring a leap of faith that goes beyond the evidence at hand (Horowitz & Strack, 2010). This suggests that while trust operates as a psychological state defined by a Rousseau's et al., (1998), there is also faith in human nature or a trusting stance (McKnight & Chervany, 2001), all of which impact an individual's tendency to trust.

Erik Erikson developed the psychosocial stages of development. Erikson postulated that basic trust was the first stage of psychological development that had to be successfully achieved, or one would experience future issues with trust. According to Erikson, trust is either successfully achieved, or not, within the first year of life. If trust is successfully achieved during this period, the individual is expected to experience an overall sense of safety and an

optimistically healthy outlook (Newman & Newman, 2014). However, if this stage is not achieved, mistrust ensues, coupled with pessimistic feelings of uncertainty, and this has been associated to set the stage for prompting attachment disorders, which will be discussed in further detail.

Typically, trust has been theorized to develop in a manner that presumes that an individuals' interpersonal history forms levels of trust with the interactions of partners. Individuals carry this history of experiences into future relationships with new partners, which determines trust (Rusbult et al., 2000). For example, Rotter (1967) developed an analysis of trust in which this phenomenon was characterized as a personality trait. Attachment theorists would argue that the way individuals tie their early attachments with primary caregivers influences individuals' future attachments with close partners (Collins & Feeney, 2004; Hazan & Shaver, 1987; Kirkpatrick & Hazan, 1994).

Some researchers have delineated between the different aspects that encompass trust (Mayer et al, 1995). Costa, Roe, and Taillieu (2001) analyzed 112 organizational teams using a structural equation model and yielded findings for a multi-component definition of trust, which includes propensity to trust, perceived trustworthiness, and cooperative and monitoring behaviors. To fully grasp how trust operates, it is important to consider the different terms within the operational definition of trust. Mayer, Davis, and Schoorman (1995) developed the Integrative Model of Organizational Trust, which provided a framework for understanding trust as it exists between two individuals—a trustor, who permits trust to the trustee, who receives the trust. The majority of findings on trust are centered on the social environmental appraisal definition of trust and lack understanding of related personality traits to the degree to which others trust or their propensity to trust is void of social contextual clues (Freitag, & Bauer, 2016).

Propensity to Trust

The second theory behind the formation of trust is that it functions more as a personality trait that serves to develop into a constant disposition after the personality has been formed (Uslaner, 2002). Trust propensity has been defined as a general disposition or tendency to trust others combining a trusting stance and faith in humanity, regardless of social context cues and relationship-specific information (Mayer et al., 1995; McKnight & Chervany, 2001). In other words, trust propensity is a stable, dispositional characteristic that influences the probability of trust in others when external context cues, such as the trustor's characteristics, are unavailable (Gill, Boies, Finegan & McNally, 2005; Grabner-Krauter et al., 2003; Mooradian, Renzl & Matzler, 2006; Rotter, 1967). Colquitt et al. (2007) argues that propensity to trust is an overall constant trait because it is not instantaneously manipulated by environment and is only subject to change due to previous experiences. Logically, trust propensity can be understood as a self-protective disposition that keeps individuals safe from others deemed potentially dangerous, while also allowing for successful reproduction and social connection with individuals that have mutually healthy goals and objectives within proximity.

However, individuals differ in this respect as evidenced by displaying a wide range of behaviors based upon this construct of trust. Individuals exhibiting a high level of trust propensity maintain a significant amount of faith in humanity (McKnight, Cummings & Chervany, 1998), whereas individuals with a lower trust propensity tend take a distrustful view toward others and behave accordingly. Faith in humanity is the concept of the global view of underlying expectations and beliefs toward nonspecific other people and human nature (McKnight & Chervany, 2001). Thus, a healthily trusting stance that facilitates effective interpersonal relationships is considered as the following: "Regardless of what one assumes

about other people generally, one assumes that one will achieve better outcomes by dealing with people as though they are well-meaning and reliable" (McKnight & Chervany, 2001, p. 39).

Therefore, having an ability, disposition, or propensity to trust others enough to establish a healthy relationship has been identified as a prerequisite to initial phases of relationship formation, which is viewed as the most effective stance for individuals to become acquainted with each other (Mayer et al., 1995). This stance serves to allow an individual the ability to organically form trust based on contextual evidential beliefs, including perceived honesty, kindness, and capability within another, thus allowing for trusting behaviors to be merited (Colquitt, Scott & LePine, 2007). McKnight et al. (1998) and Mayer et al. (1995) identified trust propensity to be based on the following: maintaining a positive conviction toward human nature, and maintaining an accepting, optimistic view that others' intentions and behaviors are not attributed to malicious ideas regardless of assumptions and negative judgments. Notably, Frazier et al. (2013) suggested that propensity to trust has a unique predictive influence on perceptions of trustworthiness even when examined alongside optimism" (p. 91). Meta-analytic research has revealed that the ability to trust as a dispositional tendency within personality is the strongest predictor of subjective wellbeing (DeNeve & Cooper, 1998).

Depending upon one's level of propensity to trust, one can either facilitate connecting with others or facilitate self-protection. Researchers have maintained that trust propensity is a general personality trait that determines the extent to which one will trust another individual that is not situation-specific. Additionally, having a high trust propensity or disposition of trust has been found to be most effective in the initial phase of a relationship when parties are still mostly unfamiliar with each other (Mayer et al., 1995). Propensity has been defined as generalized expectations of others assumed to be stable across different situations; therefore, one can

conclude that trust appears to function as a social lubricant in which underlying trust propensity beliefs and assumptions translate into trusting behavior or distrusting behavior, thereby impacting interpersonal relationships accordingly. Congruent with this conclusion is that trust propensity not only acts within newly formed relationships but, as Govier (1994) stated, acts as a filter that can alter interpretations of others' actions in a manner that is highly speculative of others (Bigley & Pearce, 1998). Understanding how trust propensity is associated within specified disordered personalities and personality traits such as attachment is lacking, as researchers Gill et al. (2005) stated:

> Future research could draw from the large body of knowledge regarding personality and individual differences. In particular, research could examine whether other established measures of personality have significant overlap with the construct of propensity to trust. To do so, propensity to trust should be explored within the broader framework of existing personality taxonomies such as the Big Five Model (e.g., Goldberg, 1990), and compare and contrast with narrow traits defining the different personality dimensions. (p. 299)

Close Trusting Relationships

Individuals ground their inferences in trust for close partners through five evidential cues that can elicit a sense of social value within a relationship (Murray & Homes, 2009). These five evidential cues ground trust and rely upon the following inference, linking to the perceiver's assessment of a specific piece of evidence (Horowitz & Strack, 2010). These social evidential cues of trust are part of the definition that trust operates specifically and not as a general, distinct trait of personality, as this study is attempting to measure. However, these cues include personal sacrifice, perceiving unique value, perceiving equal status, perceiving to be better than alternatives, and perceiving the other as facing barriers (Horowitz & Strack, 2010). These cues are the contextual factors that can ground trust within close relationships. Further trusting beliefs that aid in the formation of close relations include perceiving others to possess honesty, kindness,

and capability (Mayer et al., 1995). "Essentially, attachment depends on the person's ability to develop basic trust in their caregivers and self" (Levy & Orlans, 2014, p. 24). This willingness to disclose one's true thoughts and feelings and become vulnerable enough to rely upon another was what Bowlby called intimacy, and he found it essential for secure attachment formation within relationships (Collins & Feeney, 2004).

Trust and Borderline Personality Disorder

The following review of research on trust, attachment, and individuals with BPD will be organized in chronological fashion to capture the timeline of relevant findings pertinent to this study. In 2010, researchers Bartz et al. set out to better understand individuals with BPD and their tendency to trust, by way of previous research that established a neurobiological link to a human neuropeptide, oxytocin, as contributing to facilitating social connection (Carter, Williams, Witt & Insel, 1992). These researchers set out to see if the nasal administration of oxytocin to participants with BPD who played a trust game would increase trusting or prosocial behavior. The study used 13 healthy control participants and 14 individuals who qualified with BPD based upon the Structured Clinical Interview for the DSM-IV Personality Disorder SCID-II (First et al., 2002), and the Experiences in Close Relationships Scale (Brennan et al., 1998) was used to determine attachment with both control and experimental groups.

Another study examined interpersonal trust in individuals with BPD through the behavioral engagement of an internet based trust game. This study's design had *n*=25 with BPD compared to control group of n=25 individuals with depression and compared the differences in the manner that these two groups played the trust related game. The researchers revealed that individuals with BPD transferred less towards others compared to controls, but took similar risks to that of the control group indicating less interpersonal trust in others (Unoka, Seres, Áspán,

Bódi & Kéri, 2009). The researchers attributed this lack of contextual trusting behavior to underlying symptomology such as anxiety related paranoia, dissociation, and problems in interpersonal relationships (Unoka et al., 2009. While these findings are pivotal to understanding trust tendencies for individuals with BPD the method for which they measured trust is inherently problematic due to a lack of validation reliability studies that verify the accuracy of the measure. Additionally, this study relies upon an environment contextual definition of trust, and not on traits based definition comparable to the concept of trust propensity.

Participants were randomly administered the intranasal oxytocin and then asked to participant in a game that allowed participants to demonstrate trusting behaviors, whereby trusting behaviors could be displayed by participants and then observed by researchers. Findings revealed no significant difference between groups in trusting behavior (Bartz et al., 2010). However, an increase in response to oxytocin administration occurred within the attachment group of preoccupied (high anxiety, low avoidance) participants, but decreased trust in individuals within the fearful/avoidant (high anxiety, high avoidance) attachment group (Bartz et al., 2010). Interestingly, avoidance levels within the attachment measure were found to mediate whether oxytocin increased trust or decreased trust within the individuals with BPD (Bartz et al., 2010). The researchers noted more differences observed between attachment styles rather than individuals with BPD compared to healthy controls (Bartz et al., 2010), illustrating the existence of a potential spectrum that individuals with BPD may possess and exhibit. Thus, this might account for the variety of symptoms found within individuals diagnosed with BPD. Additionally, these findings highlight a lack of consensus regarding a consistent definition of trust. The cooperative game used within this study appears, at best, a reliable and valid measure to assess trust—that is, a social environmental appraisal-based conceptualization of trust—but lacking the

personality trait component of propensity to trust. Additionally, the research referred to trust as an "emotion," potentially influenced by oxytocin, highlighting the inconsistencies previously mentioned to be found within an overall lack of a consistent definition of trust. The researchers Bartz et al. (2010) attributed the findings to oxytocin possibly making environmental cues "more salient," thus decreasing trust. This interpretation is valid regarding the theory that individuals with BPD have, at times, impaired cognitive interpretations; however, it potentially overlooks dispositional differences in trust propensity. These differences were not measured directly, but illustrated through observable behavior and interpreted by their conceptualization of trusting behavior.

Another study with a similar design examined how oxytocin was associated with interpersonal trust for individuals diagnosed with BPD with a history childhood trauma. The researchers found congruent findings with the study, and that the administration of oxytocin lowered trust, which was associated specifically to correlate with participants with a history of sexual trauma (Ebert et al., 2013). A different study (Miano, Fertuck, Arntz & Stanley 2013) examined trust within individuals with BPD from the conceptualization of rejection sensitivity, further exploring the prevalent fear of abandonment aspect of the disorder. The authors found a negative correlation between BPD symptoms and the ability to appraise contextual social trust cues. In other words, individuals with more pronounced features of BPD interpreted neutral faces as more untrustworthy (Miano et al., 2013). These researchers concluded that this relationship may have formed due to repeated experiences of rejection, thus, heightening individuals' sensitivity to being rejected as a self-protective mechanism. Provided the evidence from previous research suggests interpersonal distrust as a significant issue within interpersonal dysfunction, one can infer that if these components are distinct elements, they may have different underlying

mechanisms. It was then suggested by (Bartz et al., 2010; Ebert et al., 2013) individuals with BPD reporting a fearful/ anxious attachment and a history of sexual trauma associated oxytocin to their trauma, therefore these individuals became less likely to trust others when administered oxytocin unlike other participants. This illustrates how the etiology of BPD is multifactorial that includes environmental experiences, including abuse, and further understanding of inherited genetic predispositions (Bandelow et al., 2005).

Summary

Borderline Personality Disorder (BPD) is a complex psychiatric condition that significantly impacts one's overall quality of life and ability to function socially (Hill et al., 2008; Linehan, 1993; Skodol, 2002b). BPD has a lengthy history that has seen many impactful research pioneers (e.g. Stern, Kernburg, Grinker, Gunderson, Singer, Linehan) who have refined the understanding of BPD and some of the contributing factors for its formation and treatment. During this evolution of understanding, individuals with BPD were often met with stigma inside and outside the field of mental health for various reasons. Much of the additional negative stigma about BPD has been a result of broad, elusive, and often overlapping diagnostic criteria including Major Depression, Bipolar Disorder and others common mood disorders; becoming stigmatized as a receptacle diagnosis (Frances & Widiger, 2012).

Impairments within interpersonal functioning have been found to be the signature characteristic for individuals who struggle with BPD (Hill et al., 2008). This impaired ability to maintain healthy interpersonal relationships (e.g., occupational, familial, romantic) for daily functioning is central to the perpetuation and exacerbation of symptoms related to BPD (Barnow et al., 2009). Previous research addressing BPD and trust was conceptualized in a manner similar to the initial theory of trust formation, which implies that trust is based on a direct observable

environmental contextual appraisal and not a personality trait such as propensity to trust, which this study will investigate. The aforementioned chapter addressed the review of literature, trait theory, BPD, a brief history of BPD, BPD's stigma, the biosocial theory, biological, social, environmental, trauma, BPD and interpersonal impairment, misperception, splitting, mentalization impairment, dissociation, emotional dysregulation theory, attachment theory, infant attachment, adult attachment, dismissive insecure, fearful/avoidant insecure, preoccupied insecure, trust, development of trust, propensity to trust, close trusting relationships, and trust and BPD. The next chapter will address the methodology for the study.

CHAPTER THREE: METHODOLOGY

The purpose of the nonexperimental design was to better understand propensity to trust in females diagnosed with BPD as it relates to their styles of attachment. Additionally, this study examined demographic information such as age, ethnicity, relationship status, and current parental relationships status. The research questions that directed this project were: (a) Is there an association between the four attachment styles and propensity to trust score? (b) Does the avoidance domain within attachment styles correlate with propensity to trust? (c) Does the anxiety domain within attachment styles correlate with propensity to trust? (e) Is there an association between relationship status and propensity to trust? and (f) Is there an association between parental relationship status and propensity to trust? This chapter describes the methodology, research design, sample, instrumentation, participants' rights, demographic questionnaire, Experiences in Close Relationships Scale, Propensity to Trust Scale, research questions and analysis. Approval for conducting the study was reviewed and approved by the IRB with approval #16-08-033.

Research Design

This nonexperimental within-subjects design measured participants' attachment styles using the Experiences in Close Relationships Scale (ECR) (Brennan et al., 1998) and Propensity to Trust Scale (PTS) (Frazier et al., 2013). Additional demographic information was gathered through the implementation of the demographics questionnaire, asking current age, ethnicity, relationship status, and current parental relationship status. The results of the survey were analyzed using descriptive statistics, a Shapiro-Wilk's Test of Normality, a Kruskal-Wallis, and a Spearman's Rho to determine the association between the styles of attachment and propensity to trust within the all-female Borderline Personality Disorder sample.

This quantitative nonexperimental study utilized a within-subjects self-reported survey

measures design. This study used validated and reliable measures for assessing attachment style using the 36-item ECR (Brennan, et. al., 1998) and propensity to trust using the 4-item PTS (Frazier et al., 2013), both individually measured on a 1-5 point Likert scale. Additional demographic information was obtained from a 4-item questionnaire examining age, ethnicity, relationship status, and parental relationship status. The study was classified as nonexperimental due to the lack of a control group or treatment intervention variables. Therefore, purposeful sampling was used to determine specific participant eligibility and participation.

The specific independent variable included attachment styles conceptualized as having four categorical, nominal groups (secure, dismissive, fearful/avoidant, and preoccupied). The specified dependent variable within this study was the propensity to trust score. Relationship status was also conceptualized as a 4-categorical nominal group (single, married, divorced, remarried), and parental relationship status was conceptualized as a 5-item categorical nominal group variable (single, married, divorced, remarried, deceased).

Sample

This sample consisted of 30 female participants with Borderline Personality Disorder, ages 18-68, voluntarily recruited from an outpatient psychiatric private practice in the Mid-Southern United States. All the participants were receiving psychiatric treatment, including medication management and mental health therapy. Participants were excluded from participation due to the following criteria: under the age of 18, active suicidal and/or homicidal ideations, recent hospitalizations (within the two weeks prior to inception of study), and/or actively under the influence of alcohol and/or illicit substances. Additionally, males with BPD were excluded from taking part in the study. Providers within the clinic were asked to refer potential candidates for participation to the principal researcher via email and/or schedule

research participation through the receptionist located within the clinic and via phone.

Setting

The participant data was collected from an outpatient psychiatric private practice clinic serving individuals experiencing a variety of psychiatric disorders. The clinic is staffed with four licensed mental health therapists and one board certified psychiatrist. Clients receive a variety of services including medication management, psychiatric evaluations, individual, couples, and family mental health therapy, and life coaching.

Instrumentation

After participants voluntarily signed the IRB-approved informed consent forms (Appendix D), they were provided with three instruments to complete. The instruments were empirically validated and reliable, and provided in the following order: the 4-item demographic form (Appendix H), the 4-item Propensity to Trust Scale (Appendix I), and the Experiences in Close Relationships Scale (Appendix J).

Participants' Rights

Participants were recruited by word of mouth from providers within the clinic. IRB protocol was followed with each voluntary participant who agreed to participate and signed the informed consent form as found in Appendix D. Participants could decline initial participation along with discontinuation of participation while taking the surveys, if so desired. Additional participant rights can be found within Appendix D.

Demographics Questionnaire

Participants provided respective information related to a basic 4-item demographic including age, ethnicity, current relationship status, and parental relationship status. These four questions were chosen based upon previous research (i.e. Brennan and Shaver, 1998) and in an

effort reduce participant fatigue.

Experiences in Close Relationship (ECR) Scale

The Experiences in Close Relationship Scale (ECR) is a two-dimensional scale that examines styles of adult attachment. The ECR was developed in 1998 by Brennan, Clark, and Shaver (1998) based on items from several existing adult attachment assessments. The ECR contains 36 items, half of which reveal the attachment anxiety domain, while the other half reflect the attachment avoidance domain, which then translate into the four styles of attachment based on beliefs about the self and others (Brennan et al., 1998; Bartholomew & Shaver, 1998; Collins & Feeney, 2004). Each item can be rated on a 5-point scale on how an individual experiences close relationships. The assessment varies from "strongly agree" to "strongly disagree" with 1 equaling "strongly agree" and 5 equaling "strongly disagree." The ECR exhibited a high level of internal consistency with coefficients α=.91 for the anxiety subscale and α=.94 for the avoidance subscale (Brennan et al., 1998); these findings were replicated after several validation studies, which found that the Experiences in Close Relationships Scale demonstrates robust psychometric assets and is empirically related to theoretically derived constructs of attachment within adults (Wei, Russell, Mallinckrodt & Vogel, 2007).

The secure style of attachment indicates low anxiety and low avoidance; the preoccupied style of attachment indicates high anxiety and low avoidance; the dismissive avoidant style of attachment indicates low anxiety and high avoidance; and the fearful avoidance style of attachment indicates high anxiety and high avoidance, as Figure 3.1 illustrates (Brennan et al., 1998). Scores from the anxiety and avoidance domains will be used to perform statistical analyses and hypothesis testing related to adult attachment styles, as seen below.

	Dismissive (insecure)	**Fearful/Avoidant (insecure)**
Avoidance	**Secure**	**Preoccupied (insecure)**

Anxiety

Figure 5
Experiences in Close Relationships Scale (ECR; Brennan, et. al., 1998).

The ECR (Brennan, et. al., 1998) is a 36-item self-reported tool commonly administered due to robust reliability yielding adult attachment on the two domains of anxiety and avoidance. Each of these domains corresponds with 18 items, respectively, for a total of 36 items. Participants endorse statements on a 5-point Likert scale on their levels of agreement. The final tabulation of these two domains of anxiety and avoidance both range from 1-5, ultimately determining the specific style of attachment, including secure, dismissive, fearful-avoidant, and preoccupied.

The attachment styles of dismissive, fearful-avoidant, and preoccupied are considered insecure due to a combination of respective domains including either high avoidance and low anxiety (dismissive), high anxiety and high avoidance (fearful/avoidant), or high anxiety and low avoidance (preoccupied). The low anxiety and low avoidance denote a secure style of attachment. The respective domains indicate specific attachment styles. For example, the secure attachment denotes an anxiety range of 1.0-3.0 and avoidance range of 1.0-3.0, whereas one

would identify a dismissive attachment with an anxiety range of 1.0-3.0 and an avoidance range of 3.1-5.0. Scoring fearful/avoidant is high in anxiety within a range of 3.1-5.0, and high in avoidance within a range of 3.1-5.0. Finally, the preoccupied style of attachment is high in anxiety within a range of 3.1-5.0 and low in avoidance with a range of 1.0-3.0. The results of this measure can be conceptualized on the aforementioned interval scale as well as the respective categorical styles of attachment, including the aforementioned groups. The ECR (Brennan et al., 1998) has been found to be a reliable measure with the population of individuals with BPD as evidenced by previous factor analysis research findings for its appropriate validity and reliability in determining attachment styles within this population (Levy, Meehan, Weber, Reynoso & Clarkin, 2005).

Propensity to Trust Scale (PTS)

The Propensity to Trust Scale (PTS) was derived from Rotter's (1967) original Interpersonal Trust Scale. Rotter was the first to investigate dispositional trust in others unrelated to the environment (Mayer et al., 1995; McKnight et al., 1998; Rotter, 1967) and then measured their general optimism toward humanity. Interestingly, Rotter made the connection between the faith found within religion and trust as evidenced by his findings, which revealed that participants who were religious exhibited a more trusting stance compared to agnostics and atheists (Rotter, 1971). Frazier et al. (2013) highlighted that many researchers inappropriately used Rotter's Interpersonal Trust Scale as a measure of propensity to trust within an environmental context, which conflicted with the established definition of trust propensity as being a more stable personality trait (Colquitt et al., 2007). Researchers Mayer and Davis (1999) produced an abbreviated version of Rotter's scale, which unfortunately demonstrated low validity and reliability (Frazier et al., 2013; Schoorman et al., 2007). Furthermore, researcher

McKnight (2002) established the trusting stance scale, which possessed some strengths, including a shorter 3-item form and a more traits-based definition of trust. However, the trusting stance scale lacked a multiple validation process and homogeneity of latent constructs as identified by Frazier et al. (2013). These voids within the understanding of propensity to trust underscored the need for researchers to further understand and accurately measure this characteristic.

Therefore, the Propensity to Trust Scale (PTS) was developed by Frazier, Johnson, and Fainshmidt (2013), which, after four validation studies, found that it demonstrates robust psychometric assets and is empirically related to theoretically derived constructs of trust. The PTS measure is statistically reliable, with an internal consistency of α=.88 for the trust scale's four items rated on a 5-point Likert scale from strongly disagree to strongly agree (Frazier et al., 2013). Furthermore, the researchers confirmed that the PTS is a valid measure of propensity to trust that yields succinct, consistently reliable results. This 4-item measure provides a continuous scale from 1-5 with the average of the four items to yield the total propensity to trust score. Permission to use the propensity to trust scale was obtained from Frazier and colleagues along with confirmed correct scoring methods, as found in Appendix H.

Research Questions

The following five research questions directed the current study:

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Research Question 1: Is there an association between the four attachment styles and propensity to trust scores?

Research Question 2: Does the avoidance domain within attachment styles correlate with propensity to trust scores?

Research Question 3: Does the anxiety domain within attachment styles correlate with propensity to trust scores?

Research Question 4: Is there an association between relationship status and propensity to trust scores?

Research Question 5: Is there an association between parental relationship status and propensity to trust scores?

Analysis

Data collected were analyzed using the latest Statistical Package for Social Sciences (SPSS) version 23. Two-tailed Cronbach's α=.05 level was used as the criterion for statistical significances in all conducted procedures. Descriptive statistics were implemented to illustrate background demographic information as it related to styles of attachment and propensity to trust including mean, median, and standard deviation, variance, and standard error of the mean. Additionally, a Shapiro-Wilk's Test was used to determine normality. Nonparametric tests were chosen due to unequal distributions of participants within each of the four attachment groups within the sample. The Kruskal-Wallis test was used to determine if there was any sort of statistical significance between attachment styles and propensity to trust in this sample. The

Kruskal-Wallis H test is a nonparametric test that can be used to determine statistical significance between two or more groups of independent variables in relation to a continuous dependent variable (Chan & Walmsley, 1997). It is used when assumptions of ANOVA are not met; however, it does not replace the ANOVA in terms of power (Laerd, 2015a). As previously stated, both the ECT and PTS scales yielded continuous and categorical data along with paired observations.

Additionally, the Spearman's rank correlation coefficient was used to analyze continuous variables of avoidance and anxiety scores as they related to propensity to trust scores, allowing for an adequate fit for the utilization of the specified Spearman's coefficient instrument (Lehman, 2005). Upon determining the association, if any, the researcher may determine to reject, or fail to reject, the null hypothesis after the data have been interpreted. The Spearman's correlation test coefficient called rho (r_s) represents the power of a correlation, within specific corresponding intervals and strengths are found in Table 6 (Weir, 2015).

Table 6
Correlational strength intervals (Weir, 2015)

(r_s) Intervals	Strengths
0-1.9	Very Weak
.02-.39	Weak
.40-.59	Moderate
.60-.79	Strong
.80-1.0	Very Strong

Summary

This methodology chapter included detailed information regarding the following sections: research design, sample, instrumentation, setting, participants' rights, instruments, demographic questionnaire, Experiences in Close Relationships Scale, Propensity to Trust Scale, research questions, and analyses. The instruments to be administered including the 4-item age,

ethnicity, relationship status, and parental relationship status demographics questionnaire, Experiences in Close Relationships Scale (ECR) (Brennan et al., 1998), and the Propensity to Trust Scale (PTS) (Frazier et al., 2013). The data will be analyzed through descriptive statistics and nonparametric statistical instruments including descriptive statistics, a Shapiro-Wilk's Test of Normality, Kurkal-Wallis H test, and Spearman's rho correlation. Results will be reported in the next chapter followed by the discussion and conclusion.

CHAPTER FOUR: RESULTS

For this study, the researcher investigated 30 females with a diagnosis of Borderline Personality Disorder (BPD) and the associations and correlations between their styles of attachment, propensity to trust, and related demographic variables. The purpose of this nonexperimental quantitative study was to better understand females' propensity to trust as it relates to their styles of attachment. Additionally, the researcher examined demographic information such as age, ethnicity, relationship status, and current parental relationship status. The research questions that guided this project were: (a) Is there an association between the four attachment styles and propensity to trust scores? (b) Does the avoidance domain within attachment styles correlate with propensity to trust? (c) Does the anxiety domain within attachment styles correlate with propensity to trust? (d) Is there an association between relationship status and propensity to trust? (e) Is there an association between parental relationship status and propensity to trust?

The content of this chapter is arranged into the following sections: statistical methods used and related descriptive statistics and results for each of the following: if there is an association between of style of attachment and propensity to trust; if there is a correlation with the avoidance domain within attachment styles and propensity to trust; if there is a correlation with the anxiety domain within attachment styles and propensity to trust; if there is an association between relationship status and propensity to trust; and if there is an association between parental relationship status and propensity to trust. The content is arranged into sections to provide an overview of the statistical procedures used and to report the findings related to the research questions respectively. Each section states the research question, and statistical procedures, and results.

Data Analysis

This data set was entered and analyzed through SPSS v.23. The data was analyzed through descriptive statistics and nonparametric statistical instruments including descriptive statistics, Shapiro-Wilk's Test of Normality, the Kurkal-Wallis H test, and Spearman's rho correlation. The nonparametric version of the one-way ANOVA Kruskal-Wallis H test was used due to a violation of assumptions. In using the Kruskal-Wallis, a further assumption was violated due to the absence of similar normal distributions for each group of the independent variable (Laerd Statistics, 2015b). Data were formally tested for violation of normality through a Shapiro-Wilk's test for normality. The Spearman's correlation test was also used to examine the correlation between PTS avoidance and anxiety.

The first assumption for using the Kruskal-Wallis H test was met by having one dependent variable—propensity to trust scale scores—measured on a continuous interval scale of averaging the 4-item 5-point Likert scale questions, with 1 being the lowest propensity to trust and 5 being the highest propensity to trust. The second assumption for using the Kruskal-Wallis H test included the independent variable consisting of 2 or more categories, which was met with the 4 categories of attachment. Next, there must be independence of observation, which was met within the study. Finally, the fourth assumption for the Kurskel-Wallis requires similar distributions. Data were formally tested for violation of normality through a Shapiro-Wilk's test for normality, revealing a PTS of .712 (p=.712), and an avoidance of .641 (p=.641), indicating non-normality data based on a 95% confidence level that data is normally distributed if p value is < .05 (Shapiro & Wilk, 1965). Therefore, this fourth assumption of approximate similar normality between independent variable groups was not achieved due to PTS (p=.712) and avoidance (p=.641). Therefore, the researcher was not permitted to report the median statistic

and was required to report the mean ranks alternatively (Laerd Statistics, 2015a).

The researcher administered three surveys including the Experiences in Close Relationships Scale (ECR), the Propensity to Trust Scale (PTS), and a 4-item demographics questionnaire determining participant age, ethnicity, relationship status, and participants' parental relationship status. The voluntary female participants had the prior diagnosis of Borderline Personality Disorder, which was verified by a board-certified psychiatrist. Individual participants took the Propensity to Trust Scale by circling the 4-items measure on the degree to which they agreed or disagreed on a scale of 1-5. Then, participants took the 36-item Experiences in Close Relationships Scale (ECR). Participant attachment scores of anxiety and avoidance were recorded on their demographics questionnaire page, and the average score of the Propensity to Trust Scale was written on the participant's paper copy. Participants took, on average, 10-15 minutes to complete the three surveys. The internal reliability statistic was calculated using SPSS V.23 with the participant's raw PTS score, which revealed a strong Cronbach's alpha (α=.82). Table 7 illustrates overall descriptive statistics including: mean, median, standard deviation, standard error, variance for the continuous variables including PTS, anxiety, and avoidance, as listed.

Table 7
Descriptive Statistics for Total Group[a]

Descriptive Statistics	Propensity to Trust Score	Anxiety	Avoidance
Mean	2.68	3.82	2.94
Median	2.50	3.95	2.95
Std. Deviation	.993	.878	.853
Standard Error	.181	.160	.155
Variance	987	.772	.729

[a]n=30

Sample Characteristics

The all-female sample of participants varied in age from 18 to 65 years old (M_{age} =35.8). The majority of all participants (90%) identified as Caucasian, as seen in Table 8. Three participants identified as African American, Pacific Islander, and Native American, respectively. The inadvertent lack of ethnic diversity within this sample reflected the disproportionately Caucasian majority demographics that comprised the area from which the sample was taken. Due to a lack of representation of diverse ethnic groups, findings cannot be generalized to diverse populations. The sample was predominately female, Caucasian and positively skewed in terms of age. One African American, one Native American, and one Pacific Islander American participated.

Table 8
All female participant demographics

Ethnicity	Frequency	%
Caucasian	27	90.0
African American	1	3.3
Pacific Islander	1	3.3
Native American	1	3.3
Total	30	100

M_{age} =35.8

Table 9
Mean PTS scores for style of attachment for total group[a]

Attachment	Frequency	PTS Mean	Std. Deviation
Secure	2	3.00	1.06
Dismissive	3	2.08	1.01
Fearful / Avoidant	11	2.56	.72
Preoccupied	14	2.85	1.18
Total	30	2.69	.99

[a]n=30

Of all the participants, 93% scored within an insecure style of attachment, with only two participants endorsing a secure style on the ECR. The most frequently observed attachment style was preoccupied (*n*=14, or 46.7%). The next most frequently found attachment style was

fearful/avoidant (*n*=11, or 36.7%). Finally, dismissive (*n*=3, or 10%) and secure (*n*=2, or 6.7%) were the least frequently subscribed-to attachment styles. The PTS means can be found in Table 10. The overall mean PTS (Frazier, et al., 2013) was 2.69.

Statistical Methods

This study required nonparametric statistical procedures due to insufficient secure and dismissive categories group sizes. Descriptive statistics used included: mean, standard deviation, variance, standard error of the mean. The nonparametric statistical tool used was the Kruskal-Wallis H test to examine research questions 1, 4, and 5, all of which involved a categorical independent variable and continuous dependent variable of propensity to trust. The researcher used the nonparametric Spearman's rho correlation test to examine research questions 2 and 3 with two continuous variables Table 11, below, presents the visual explanation of the statistical procedures used and the variable conceptualizations.

Table 10
Statistical tests and variables

Research Questions	Statistical Test	Independent Variable
1	Kruskal- Wallis H	Style of Attachment
2	Spearman's Rho	Avoidance
3	Spearman's Rho	Anxiety
4	Kruskal- Wallis H	Relationship Status
5	Kruskal- Wallis H	Parental Relationship Status

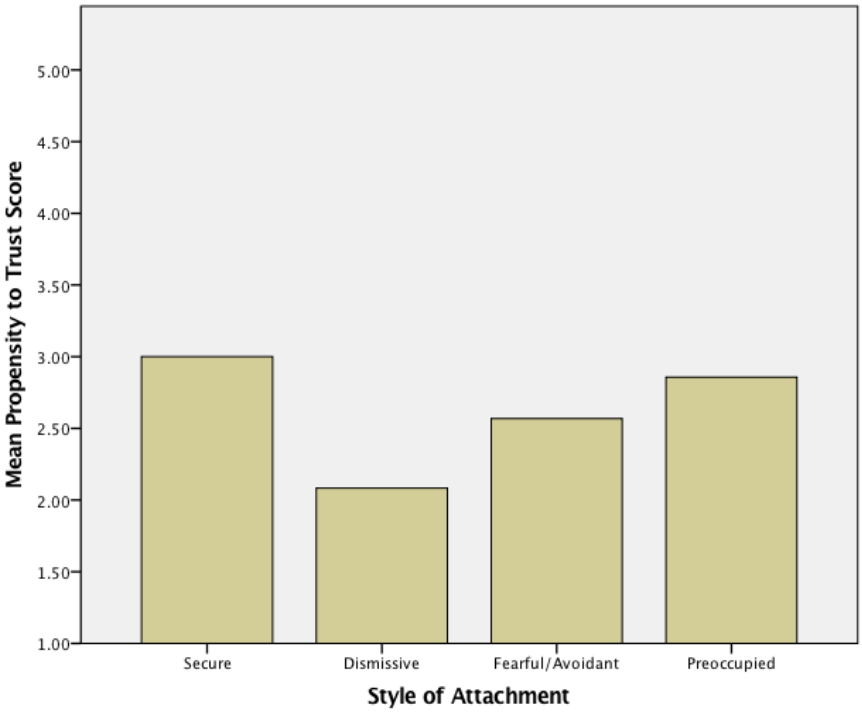
Dependent Variable= Propensity to Trust Score (PTS)

Findings for Research Question 1

Research Question 1: Is there an association between the four attachment styles and propensity to trust scores? A Kruskal-Wallis H test was conducted to determine if there were differences in propensity to trust scores among the following four styles of attachment: "secure," "dismissive," "fearful/avoidant," and "preoccupied" within females with BPD. Distributions of propensity to trust scores were similar for all groups, as presented by the visual inspection of the

bar graph in Figure 11 which indicates no significant difference.

Figure 11
SPSS V. 23 Mean PTS score and ECR styles of attachment

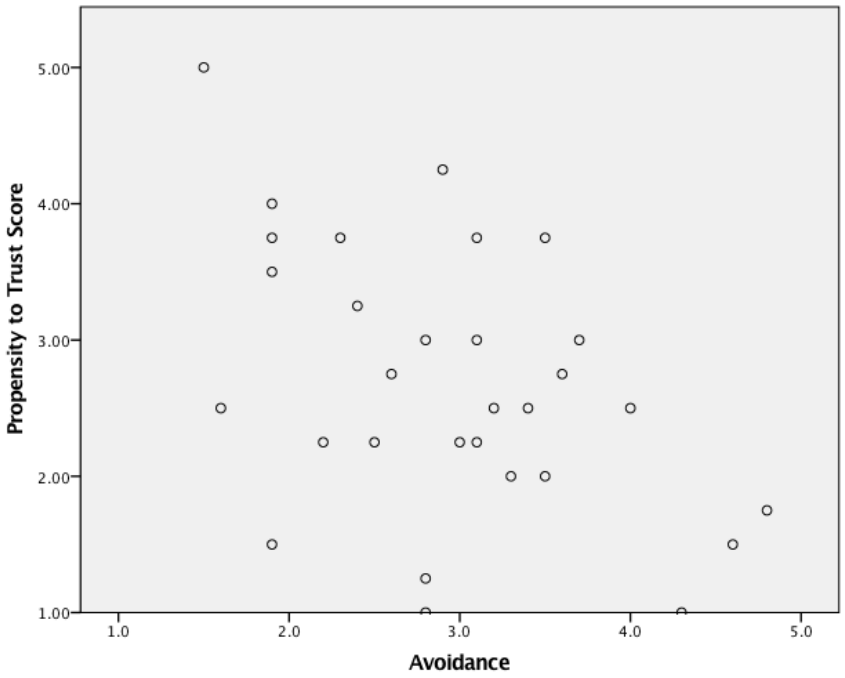


Propensity to trust scores of groups that differed in their style of attachment are secure (*n* = 2), dismissive (*n* = 3), fearful/avoidant (*n* =11) and preoccupied (*n* = 14). The frequency of styles of the participants varied considerably within each attachment group. Propensity to trust scores were not significantly different among groups: $\chi^2(3) = 1.546$, $p = .672$. The mean propensity to trust scores increased incrementally from dismissive (*M* = 2.25), fearful/avoidant (*M* = 2.50), preoccupied (*M* = 2.87), and secure (*M* =3.00). Differences were not significant; therefore, the findings fail to reject the null hypothesis. The data indicate that there is no association between the four attachment styles and propensity to trust, as illustrated in Figure 11 bar graph.

Findings for Research Question 2

Research Question 2: Does the avoidance domain within attachment styles correlate with propensity to trust scores? A Spearman's rank-order correlation was conducted to assess the relationship between the attachment style of avoidance and propensity to trust. A preliminary analysis showed the relationship to be monotonic, as evidenced by visual inspection of the scatterplot in Figure 12 (r_s (28) = -.375, p = .041). Therefore, the researcher must reject the null, indicating a significant negative correlation between avoidance and propensity to trust within this population. The data indicate that there is a negative correlation between the avoidance domain within attachment styles and propensity to trust scores. Specifically, an increase in avoidance was associated with a decrease in propensity to trust.

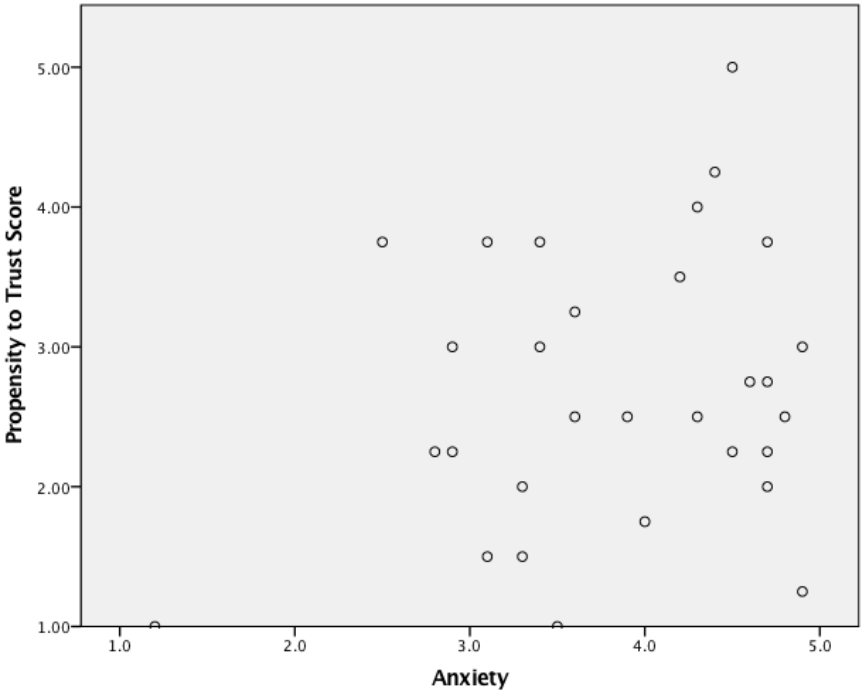
Figure 12
SPSS V.23 *PTS scores / avoidance domain of attachment scatterplot*



Findings for Research Question 3

Research Question 3: Does the anxiety domain within attachment styles correlate with propensity to trust scores? A Spearman's rank-order correlation was conducted to assess the relationship between participants' anxiety and propensity to trust. A preliminary analysis showed the relationship to be non-monotonic, as evidenced by the visual inspection of the scatterplot in Figure 13. The correlation between anxiety and propensity to trust was not statistically significant at $r_s(28) = .127$, $p = .504$. Therefore, the researcher must fail to reject the null. The data indicate that there is no correlation between the anxiety domain within attachment styles and propensity to trust.

Figure 13
SPSS V.23 *PTS scores / anxiety domain of attachment scatterplot*



Findings for Research Question 4

Research Question 4: Is there an association between relationship status and propensity to trust scores? A Kruskal-Wallis H test was run to determine the association between current relationship status and propensity to trust score. Relationship status was divided into three categories: "married," "single," and "divorced." Differences in the frequency in distribution were evident with participants that subscribed to the various categories of relationship status as follows: single (n = 17), married (n = 8), divorced (n = 5). Distributions of propensity to trust scores were similar for all categories as assessed by the visual inspection of a boxplot. Propensity to trust score means increased from divorced, to married, to single correspondingly as seen in Figure 14. The research failed to reject the null based on the results as evidenced by the non-statistical significance: $\chi^2(2) = .927$, $p = .629$. Therefore, the researcher must fail to reject the null hypothesis. The data indicate that there is no association between relationship status and propensity to trust. The majority of participants (56%, or n=17) subscribed to a single relationship status. The second most frequently found relationship status was married (26%, or n=8). The least-frequent relationship status found was divorced at (16%, or n=5).

Table 14
Participant relationship status frequency

Relationship Status	Frequency	Percentage	Mean PTS
Single	17	56.7%	2.82
Married	8	26.7%	2.56
Divorced	5	16.7%	2.40
Total	30	100%	2.68

Findings for Research Question 5

Research Question 5: Is there an association between parental relationship status and propensity to trust scores? A Kruskal-Wallis H test was run to determine the association between current parental relationship status and propensity to trust scores. Parental relationship status was divided into four categories including: "married," "divorced," "remarried," and "deceased." Frequency distributions within each category differed as evidenced by: married (n = 15 or 50%), divorced (n = 6 or 20%), remarried (n = 3 or 10%), and deceased (n = 6 or 20%). The PTS mean was the highest in participants who reported their parents as married, followed by deceased, followed by remarried, and finally parental relationships as reported to be divorced reported the lowest PTS mean scores as seen in Table 15. Distributions of propensity to trust scores were similar for all categories as assessed by the visual inspection of a boxplot. Propensity to trust scores were not statistically significantly different between groups: $\chi^2(3) = 1.250$, $p = .741$. The data indicates that there is no association between parental relationship status and propensity to trust.

Table 15
Participant's parental relationship status descriptive statistics

Parental Relationship	PTS Mean	*N*	Std. Deviation
Married	2.81	15	1.20
Divorced	2.33	6	.46
Remarried	2.50	3	1.14
Deceased	2.79	6	.82
Total	2.5	30	.99

Summary

This analysis Chapter Four provided the results to this nonexperimental quantitative study examining females with BPD and their style of attachment as it relates to their propensity to trust in an all-clinical sample. The first research question was answered using a Kruskal-Wallis H test was instead of the one-way ANOVA due to a violation of assumed normality. This test examined differences in propensity to trust scores among four styles of attachment: "secure," "dismissive," "fearful/avoidant," and "preoccupied" styles of attachment within females with BPD. A Shapiro-Wilk test of normality revealed a PTS of .712 (p=.712), an anxiety score of .018 (p= .018) and an avoidance score of .641 (p=.641), indicating non-normally distributed data based on a 95% confidence level. Data is normally distributed if the p value is < .05. Therefore, the fourth assumption of required normality was not achieved due to the PTS (p=.712) and avoidance (p=.641) scores. The researcher was not permitted to report the median statistic and was required to report the mean ranks alternatively (Laerd Statistics, 2015a). Distributions of propensity to trust scores were similar for all groups, as assessed by the visual inspection of the Table 12 boxplot, and were validated to be non-normally distributed. The data indicate that there is no association between the four attachment styles and propensity to trust, as illustrated in the Figure 11 bar graph.

The second research question was answered using a Spearman's rank-order correlation to assess the relationship between the attachment style domain of avoidance and propensity to trust. A preliminary analysis showed the relationship to be monotonic, as evidenced by the visual inspection of the scatterplot in Figure 12 ($r_s(28)$= -.375, p = .041). Therefore, the researcher must reject the null, indicating a statistically significant negative correlation between avoidance and propensity to trust within this population. The data indicate that there is a negative correlation

between the avoidance domain within attachment styles and propensity to trust scores. Specifically, an increase in avoidance was associated with a decrease in propensity to trust.

The third research question was answered using a Spearman's rank-order correlation to assess the relationship between the anxiety domain within attachment styles and propensity to trust. A preliminary analysis showed the relationship to be non-monotonic, as evidenced by the visual inspection of the scatterplot in Figure 13. The data indicate that there is no correlation between the anxiety domain within attachment styles and propensity to trust.

The fourth research question was answered using a Kruskal-Wallis H test to determine the association between a participant's current relationship status and propensity to trust score. Relationship status was divided into three categories: "married," "single," and "divorced." The data indicate that there is no association between relationship status and propensity to trust ($\chi^2(2) = .927$, $p = .629$).

The fifth research question was answered by running a Kruskal-Wallis H test to determine the association between a participant's current parental relationship status and propensity to trust scores. Parental relationship status was divided into four categories: "married," "divorced," "remarried," and "deceased." The data indicates that there is no association between parental relationship status and propensity to trust ($\chi^2(3) = 1.250$, $p = .741$).

The Chapter four results were provided in the following respective sections: results, data analysis, characteristics of sample, statistical methods, findings of research, findings of research questions 1 through 5, and associated tables. The following chapter will discuss the results in depth as they relate to the review of the literature and recommendation for further research.

CHAPTER FIVE: DISCUSSION

Overall, the findings for this study revealed a noteworthy inverse correlation between the avoidance attachment style and propensity to trust within the sample. However, most of the null hypotheses were retained, as the data indicated. This was anticipated, considering three main factors that might have influenced the non-significance found within the results: First, there were direct and indirect limited ranges for the phenomenon being examined. Second, there was a small sample size, *N*=30, which was insufficient; there were not enough participants within each category of attachment style. Third, the data collected lacked diversity of ethnicity, with Caucasian participation at 90% and only three minority participants, including one Native American, one African American and one Pacific Islander. Further diversification was needed to fully understand and generalize findings to ethnic minority groups. Moreover, all participants were recruited from a similar geographical region and may have a cultural bias that could have impacted the findings in an unknown manner. Regardless of these limitations, however, the findings of this study are noteworthy and merit further deliberation through discussion.

Discussion of Descriptive Statistics

The overall mean PTS score for the sample of *N*=30 mean the PTS score was 2.68, with a standard deviation of .993, and mean age of 35.8 years old. The age of the participants appeared to be disproportionately young, which the researcher attributed to the fact that the area demographics from which the participants were sampled from was near a major mid-southern university.

Congruent with previous meta-analysis findings regarding individuals with BPD, this study revealed preoccupied insecure attachment style to be the most frequent style of attachment found among females with BPD (*n*=14, or 46%) (Agrawal et. al., 2004). Additionally, as further

support, previous studies found fearful/anxious insecure (*n*=11, or 36%) to be the second most-common attachment style within this population. According to research, individuals with this attachment style present with more pronounced symptoms of BPD (Levy et al., 2005). Furthermore, dismissive attachment was found to be the least frequently observed insecure attachment, which is congruent with BPD attachment research. The majority of participants with BPD exhibited an overall below average propensity to trust score (M= 2.69), as seen across the three insecure styles of attachment ($M_{\text{dismissive}} = 2.08$, $M_{\text{fearful/avoidant}} = 2.56$, $M_{\text{preoccupied}} = 2.85$). Secure attachment (M=3.00) was unsurprisingly higher than the other three non-secure attachment styles.

The most frequent relationship status among participants was "single," at 56.7%. The second most frequently subscribed relationship status was "married," at 26.7%. Finally, "divorced" was reported in 16.7% of the participants within the study. Interestingly, participants that reported their relationship status as "single" had the highest PTS mean (*M*=2.82). The participant relationship status that exhibited the second highest PTS mean score was "married" (M=2.56). Finally, participants who reported their relationship status as "divorced" reported the lowest PTS scores at *M*=2.40.

Participants most frequently reported their parent's to be married at 50%. The second most frequently endorsed parental relationship status was tied with "divorced" and "deceased" both at 20% of the participants' parents' relationship. Finally, "remarried" was revealed to be the least frequently reported participant parental relationship status. However, "divorced" had the lowest mean PTS scores at *M*=2.33. The second lowest mean PTS score was found in participants whose parents were remarried *M*=2.50. Moreover, participants who reported their parent(s) as deceased had an average score of *M*=2.79. Participants who reported the highest PTS

scores were those who reported that their parents were still married, with an average of *M*=2.81.

Notably, participants who reported to their relationship status as divorced had the lowest mean PTS score *M*=2.4, as well as participants who reported their parents as divorced *M=2.33.* There may be various contributing factors to these lower PTS scores within the domain of divorce for participants, one of which may be trust having been used against these individuals to their detriment and ultimately causing the demise of the relationship. Conversely, participants who reported their relationship status as single reported the highest mean PTS scores at *M*=2.82, and those whose parents' relationship statuses were married had mean PTS scores of *M*=2.81.

Discussion of Research Question 1

Research Question 1: Is there an association between the four attachment styles and propensity to trust scores? After running the Kurskal-Wallis H test, no significance was found, and the distribution of propensity to trust scores for the four attachment styles was equal. Interestingly, there were no significant differences between groups of attachment styles; however, 93% of the participants reported an insecure style of attachment, confirming previous meta-analysis attachment BPD research (Agrawal et. al., 2004). Congruent with previous findings related to attachment and individuals with BPD, we found no differences between styles of attachment and trust as defined by contextual clues (Bartz et al., 2010; Ebert et. al., 2013). However, this is the first study to reveal no relationship between attachment styles and trust propensity. Further experimental research with a control group is needed to examine this finding further.

Discussion of Research Question 2

Research Question 2: Does the avoidance domain within attachment styles correlate with propensity to trust? After running a Spearman's correlation, it was determined that there was a significant negative correlation between avoidance and propensity to trust in the population of females with Borderline Personality Disorder as evidenced by r_s (28) = -.375, p = .041. This significant negative correlation indicates that as avoidance scores increased within the (ECR) scale, the (PTS) scores went down.

In other words, as avoidant tendencies within relationships increased, the disposition for that individual to trust went down. Researchers Colquitt, Scott, and LePine (2007) revealed a moderate mediation with trustworthiness or cues others identify as worthy of trust and trust propensity, or the tendency to trust others. These findings, in conjunction with this study's findings about the negative correlation between avoidance and trust propensity, suggest that this relationship could potentially extend into others' perceptions of trustworthiness. Logically, these findings between propensity to trust and trustworthiness (Colquitt et al., 2007) could potentially translate into the interpersonal interpretation of others perceiving a high degree of avoidance in an individual, and they may then tend to perceive that individual as less than trustworthy.

Avoidance

Avoidance within individuals experiencing a variety of psychological struggles is not an uncommon finding. It is natural for individuals to want to avoid psychological pain, similar to how they desire to avoid physical pain. One can see how the radical acceptance skill within Dialectical Behavior Therapy (DBT; Linehan, 1993, 2014) addresses this characteristic of avoidance within individuals with BPD. As Linehan (1993) points out, avoidant behavior is prevalent within individuals with BPD, and it is the therapist's duty to act accordingly:

> The most important response is to block avoidance. The fundamental action tendency in fear-related emotion is escape or avoidance. Borderline patients (and many other patient populations as well) consistently try to avoid situations that create aversive emotions. During sessions, they resist behavioral analysis and discussions of emotion-provoking situations. (p. 354-355)

Frequently, with individuals that have experienced trauma, avoidance is a coping mechanism for keeping control of traumatic memories. Linehan (1993) illustrates that avoidance is a common strategy in coping that helps the patient knowingly or inadvertently keep negative emotions at bay, which impacts cognitions and behaviors.

Discussion of Research Question 3

Research Question 3: Does the anxiety domain within attachment styles correlate with propensity to trust? After running a Spearman's correlation, it was determined that there was no correlation between anxiety and propensity to trust in the population of females with Borderline Personality Disorder, as evidenced by the results ($r_s(28)= .127$, $p = .504$). This study determined that there was no significant correlation between anxiety and propensity to trust. These findings are congruent with recent studies that suggest there is no relationship between neuroticism—or the tendency to experience anxiety—and levels of trust, contrary to a hypothesized relationship that individuals who "worry more, [they] should display lower levels of trust" (Freitag & Bauer, 2016, p. 3). Anxiety may play a more pivotal role in behaviors that influence avoidance, which may then influence propensity trust, more than anxiety directly influences trust. Conversely, one may anticipate that there would have been a significant relationship between anxiety and propensity to trust in this population, which exhibits a fear of being abandoned within relationships.

Discussion of Research Question 4

Research Question 4: Is there an association between relationship status and propensity to trust? After running the Kurskal-Wallis H test, no significance was found, and the distribution of propensity to trust scores for the relationship categories was equal. Interestingly, there were no significant differences in relationship categories between groups . The research failed to reject the null based on the non-statistical significance: $\chi^2(2) = .927$, $p = .629$. The data indicates that there is no association between relationship status and propensity to trust.

The most frequent relationship status among participants was "single" at 56.7%. The second-most frequently subscribed relationship status was "married" at 26.7%. Finally, "divorced" was reported in 16.7% of the participants within the study. Interestingly, the highest PTS mean was for participants who reported their relationship status as "single" (M=2.82). The participant relationship status that exhibited the second highest PTS score was "married" (M=2.56). Finally, participants who reported their relationship status as "divorced" reported the lowest PTS score at *M*=2.40. Larzelere and Huston (1980) found trust to correspond with level of commitment; as such, individuals who were newly engaged to be married, along with individuals who have been married for an extensive period of time with frequent intimate disclosures, scored the highest on the dyadic trust scale, while the ex-partners of previous relationships were least trusted.

Discussion of Research Question 5

Research Question 5: Is there an association between parental relationship status and propensity to trust? After running the Kurskal-Wallis H test, no significance was found and the distribution of propensity to trust scores for the parental relationship categories was equal. The median propensity to trust scores were not statistically significantly different between groups

($\chi^2(3) = 1.250$, $p = .741$). The data indicates that there is no association between parental relationship status and propensity to trust. According to Brennan and Shaver (1998), individuals who have experienced parents getting divorced were more likely to display a fearful style of attachment. Similarly, King's (2002) study revealed participants with a parental relationship status of divorce reported no significant difference in trust, with the exception of participants exhibiting more distrust toward fathers post-divorce. However, there were no significant differences found between parental relationship status and propensity to trust in the current study. Nevertheless, individuals who reported their parents to be divorced had the lowest propensity to trust mean and median scores compared to the other three parental relationship categories.

Limitations

As mentioned, the study used a small (N=30) sample, with little variation in age (M=35) and ethnicity (90% of all participants identified as Caucasian). This lack of ethnic diversity within this sample was a significant limitation, as findings cannot be applied to ethnic minorities. Further examination with a more diverse population is warranted. The sampling method was limited to one outpatient clinic within a single geographical area of the United States of America. While understanding that females make up the most frequently diagnosed population of BPD (Linehan, 1993), the study neglected to explore potential differences that may exist in males with BPD and their propensity to trust; this matter also requires further investigation. The majority of similar previous studies examining BPD and trust used nonclinical samples (e.g. Bartz). Although a clinical sample was used in this study, it lacked a standardized method for assessing the participants for BPD aside from a previous diagnosis within the participant's clinical history, which was validated by a board-certified psychiatrist. The findings for the ranked attachment

styles and respective PTS scores are encouraged to be assessed with caution; the dismissive attachment group, which was found to have the lowest PTS score, had three (*n*=3) participants. Furthermore, the participants' parental relationship status was classified based on one of the two parents experiencing a death and/or remarriage status to simplify classification and tabulations.

Conclusion

There is a multitude of research on trust, as defined as "a psychological state comprising the intention to accept vulnerability based upon the positive expectations of the intentions or behavior of another" (Rousseau et al., 1998, p. 395), and individuals with BPD and their attachment styles (Bartz et al., 2010; Miano et al., 2013). Moreover, there have been studies examining trust through this psychological lens in relation to attachment style (Agrawal et al., 2004; Bartz et al., 2010; Ebert et al., 2013) in general. However, minimal research has examined trust propensity as a personality trait or attempted to understand specifically how females with BPD exhibit propensity to trust as it relates to attachment styles. As such, this study has revealed notable findings that are encouraged to be examined further in future research.

Additionally, 93% of the total participants subscribed to an insecure style of attachment, backing the conclusions of Agrawal et al. (2004), which established through meta-analysis the association of insecure attachments for the majority of individuals with BPD (Agrawal et al., 2004). In addition, the overall findings of this study revealed below-average propensity to trust scores of 2.6 out of 5, supporting Miano et. al. (2013) findings that individuals with BPD have an untrustworthiness bias. Congruent with previous evidence that found a minimal percentage of individuals with BPD subscribing to a secure style of attachment, this study showed 93% of participants with insecure attachment styles; notably, however, we found a higher, on average, PTS score for the two participants who reported a secure attachment style of *M*=3.0. A

statistically significant negative correlation was found between the avoidance domain within attachment styles and propensity to trust within an all-female BPD sample. Overall, findings concluded that the dismissive insecure style of attachment was the least frequently subscribed-to insecure style and had the lowest average propensity to trust score (M=2.08). There is reason to support further investigation with a larger sample size and an experimental control group, of the negative correlational findings between higher avoidance and lower propensity to trust scores. Congruently, the dismissive insecure style of attachment is inherently high in the domain of avoidance and low in the domain of anxiety. Linehan (1993) argued that highly traumatic and invalidating environmental experiences play a significant role in the development of the emotion dysregulation and interpersonal impairment found within individuals with BPD. These findings show the need to investigate a comparative analysis of previous trauma and propensity to trust as it relates to insecure styles of attachment.

Clinical and Educational Implications

There are a variety of clinical and counselor educational implications from these findings. Trust is essential for a solid therapeutic rapport, which is required for effective therapy (Raskin & Rogers,1989; Rogers & Dorfman, 1951). The more mental health providers can fully understand concepts related to propensity to trust, the more they will be able to foster understanding and empathy for those with a low propensity to trust (Mikulincer et al., 2001). Researchers Mikulincer et al. (2001) found a negative correlation between avoidance and empathy. In other words, as avoidance tendencies increase, empathy exhibited by others decreases, along with prosocial behaviors congruent with such aspects as credibility and kindness (Mayer et. al., 1995), which are crucial social contextual cues for eliciting trust (Ganesan & Hess, 1997) and social cohesion (Milkulincer et al., 2003). Therefore, avoidant

behavior can potentially increase emotional pain related to psychological stress, and lose opportunities for gaining empathy. Avoidance and control become associated with comfort and safety as seen within insecure attachments and, therefore, the likelihood to also avoid emotionally challenging aspects within therapy becomes inherently prevalent within a counseling relationship.

Current and future mental health providers working with individuals with BPD may need to examine using the clinical skills of balancing therapeutic rapport with the skills of immediacy and confrontation to verbalize observations of avoidant behavior within a session to mutually encounter and face challenging issues, as Linehan (1993) asserts. Individuals who exhibit more avoidance within interpersonal relationships potentially may be more likely to distrust their interpretation of reality and/or emotional experience, while losing understanding and empathy. As trustworthiness factors have been identified within social contextual clues of consistency, benevolence, and ability (Horowitz & Strack, 2010), avoidant individuals may be perceived as untrustworthy by others interpersonally and distrustful of their self-experience due to emotion dysregulation, which is central to much of the theory that has driven interpersonal impairment in past research (Carpenter & Trull, 2013; Gratz et al., 2006; Schmahl et al., 2014).

For the field to understand the significance found between avoidance and propensity to trust within this all-female BPD sample will provide support for existing findings for individuals with BPD to experience fewer interpersonal interactions, compared to other personality disorder types, consisting of interpersonal uncertainty, disputes, sorrow, and emptiness (Stepp et al., 2009). Furthermore, this lower propensity to trust may have an impact on negatively impact such interpersonal impairments as personal experience of such emotions, supported by the emotion dysregulation theory (Gratz et. al., 2006) asimpaired mentalization (Fonagy, et al., 2011) and

paranoia provoked within social situations. Thus, it is unknown how dispositions of low propensity to trust may impact longstanding, all-encompassing theories of pathology such as Linehan's biosocial model (Figure 2). Future studies should examine how propensity to trust potentially impacts this biosocial model of BPD pathology by examining its influence on rejection sensitivity (Miano et al., 2013), interpretation of invalidating environments, and contribution to chronic emotion dysregulation (Linehan, 1993). Furthermore, understanding how individuals may not be able to exhibit this tendency evokes empathy and understanding in a mental health provider to decrease the stigma prevalent within the field today (Chafos & Economou, 2014; Latalova et al., 2015). This understanding also positively affects significant others who may have a relationship with an individual struggling with BPD and/or trust.

Future Research Implications

Fully understanding the mechanisms behind attachment styles, propensity to trust and the concepts of trust in general will not only aid in understanding how to treat individuals with BPD, but will help to specifically refine current interpersonal effectiveness skills treatment. It has been the researcher's clinical experience that the current interpersonal effectiveness module within DBT has the potential for enhancement, considering the degree to which interpersonal impairment dominates many individuals with BPD (Hill et al., 2008; Lieb, et al., 2004). Linehan's (2014) most recent addition to DBT contains minimal changes to previously established (1993) interpersonal effectiveness skills, which primarily focus on obtaining objectives skillfully. Recent additions to the interpersonal effectiveness skills module include skills for building new relationships and methods for ending destructive ones safely (Linehan, 2014). Therefore, further research should examine addressing more in-depth interpersonal relationship mechanisms by way of developing skills for learning how and when to use trust as a

method for establishing healthy boundaries within relationships.

A quantitative experimental analysis could examine individuals with BPD receiving DBT treatment compared to individuals with BPD receiving a modified interpersonal effectiveness module with trust education. The supplemental trust education could provide participants with an understanding and identification of the environmental social cues necessary when trust is healthy and merited. This could include a dialectical method for mindfully identifying the following trustworthy characteristics: perceiving others to possess honesty, kindness, and capability (Mayer et al., 1995), and predictability, dependability, and consistency (Rempel, Holmes & Zanna, 1985). Conversely, knowing how to identify potentially dangerous behaviors in others, such as manipulation, ill-intention, unpredictability, and unreliability could potentially prevent abusive toxic relationships from taking place and facilitate knowledge of when to exercise boundaries and maintain healthy attachments. Finally, a standardized, validated measure could be delivered pre/post treatment to determine if there were group differences in the treatment as usual versus a modified version of interpersonal effectiveness in terms of overall BPD symptomology.

Objectives for this study include refining current interpersonal effectiveness treatment and promoting an understanding of advanced skills for healthy, balanced relationships for individuals with BPD. Further objectives for this study include understanding the effectiveness of a treatment concentrated on more in-depth interpersonal trust skills to navigate emotion dysregulation tendencies central to the perpetuation and exacerbation of symptoms related to BPD (Schmahl et al., 2014), and decreasing harmful impulsive behaviors such as self-harm and suicide attempts associated with decreasing interpersonal impairment (Barnow et al., 2009). Ultimately, through facing trust issues with clients by adding a more in-depth trust educational component to such preexisting empirically proven methods as DBT, this population may be more

likely to resolve impaired abilities, learn to maintain healthy interpersonal relationships (e.g., occupational, familial, romantic), and improve daily functioning.

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Appendix A

IRB Approval

UNIVERSITY OF ARKANSAS

Office of Research Compliance
Institutional Review Board

August 24, 2016

MEMORANDUM

TO:	Jacob White Roy Farley
FROM:	Ro Windwalker IRB Coordinator
RE:	New Protocol Approval
IRB Protocol #:	16-08-033
Protocol Title:	*Attachment Styles and Trust Propensity in Females with Borderline Personality Disorder*
Review Type:	☐ EXEMPT ☒ EXPEDITED ☐ FULL IRB
Approved Project Period:	Start Date: 08/24/2016 Expiration Date: 08/21/2017

Your protocol has been approved by the IRB. Protocols are approved for a maximum period of one year. If you wish to continue the project past the approved project period (see above), you must submit a request, using the form *Continuing Review for IRB Approved Projects*, prior to the expiration date. This form is available from the IRB Coordinator or on the Research Compliance website (https://vpred.uark.edu/units/rscp/index.php). As a courtesy, you will be sent a reminder two months in advance of that date. However, failure to receive a reminder does not negate your obligation to make the request in sufficient time for review and approval. Federal regulations prohibit retroactive approval of continuation. Failure to receive approval to continue the project prior to the expiration date will result in Termination of the protocol approval. The IRB Coordinator can give you guidance on submission times.

This protocol has been approved for 30 participants. If you wish to make *any* modifications in the approved protocol, including enrolling more than this number, you must seek approval *prior to* implementing those changes. All modifications should be requested in writing (email is acceptable) and must provide sufficient detail to assess the impact of the change.

If you have questions or need any assistance from the IRB, please contact me at 109 MLKG Building, 5-2208, or irb@uark.edu.

IRB #16-08-033 Approved: 08/24/2016 Expires: 08/21/2017

Appendix B

Permission to Use Propensity to Trust Scale

From: **Jacob White** <jacobwhite@pdhclinic.com>
Date: Wednesday, October 5, 2016
Subject: Propensity to Trust Scale
To: mlfrazie@odu.edu

Dr. Frazier,

In reference to your 2013 article titled Development and Validation of a propensity to trust scale, how do you go about scoring the 4-item measure? Is it on an overall 1-5 average with a higher average indicating a higher propensity to trust or is there another method for scoring this?

I am currently finishing my doctorate at the University of Arkansas and would like your permission to use this scale in my examination of females with borderline personality disorder.

I look forward to hearing back and thank you in advance.

Respectfully, Jacob White

Reply:

From: **Frazier, Lance** <LanceFrazier@creighton.edu>
Date: Wednesday, October 5, 2016
Subject: Re: Propensity to Trust Scale
To: Jacob White <jacobwhite@pdhclinic.com>

Hi Jacob,

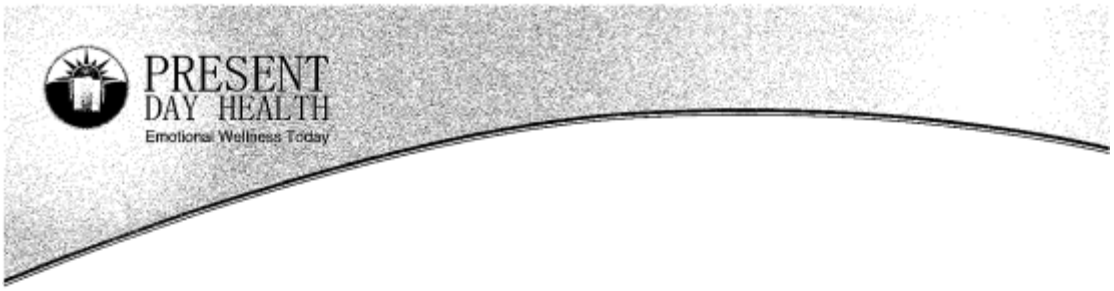
Thank you for your interest in our work!! Yes, it is an average of the four items with a higher score indicating a higher propensity to trust. Thanks and let me know if you have other questions!

Lance

IRB #16-08-033 Approved: 08/24/2016 Expires: 08/21/2017

Appendix C

Permission to Utilize Clinic for Participation
Email Communication



To whom it may concern,

The principal researcher, Jacob White, obtained permission from the owner and psychiatrist, Dean Priest MD to gather data from consenting participants for the research study titled Attachment Styles and Trust Propensity in Females with Borderline Personality Disorder. For any further questions please feel free and contact the office at (479)320-7100.

Respectfully, Jacob White

Jacob White LPC

p: 479.320.7100 f: 844.866.6851 www.pdhclinic.com 213 West Monroe, Suite Q, Lowell, AR 72745

Appendix D
Consent to Participate Form Used in Study
Attachment Styles and Trust Propensity in Females with Borderline Personality Disorder
Consent to Participate in Research Study

Principal Researcher: Jacob M. White
Faculty Advisor: Dr. Roy Farley

Instructions

Please read this consent to participate form in order for you to decide if you would like to participate in this study. Please ask the researcher, Jacob White, questions at any point there may be confusion. Listed below is the purpose of the study, risks, inconveniences, discomforts, and any other relevant information. Upon deciding to participate you will be provided a copy of this form.

Why is this study being completed?
This study is being done to investigate females with Borderline Personality Disorder and their styles of attachment as it relates to their propensity to trust. The researcher believes that an understanding of attachment style as it relates to propensity to trust will aid in improving the current understanding of individuals with Borderline Personality Disorder and potentially improve treatment.

Why is this considered research?
This is a research study investigating the relationship between aspects of attachment style and trust propensity or your likelihood to trust others without context.

Why am I being asked to participate in this study?
You are being asked to take part in this study because you qualify as being female and having received a diagnosis of Borderline Personality Disorder without recent inpatient hospitalizations.

Do I have to participate in this study?
No. You have the right to choose whether or not you want to take part in this study. If you decide to participate and later change your mind, you have the option to stop participation at any time. If you decide to stop participating at any time, all information that you have provided will be omitted from the study and destroyed.

How many people will take part in the study?
Approximately 30 individuals will participate in the study.

What is involved in the study?
If you volunteer in the research study, you will be asked to sign this consent form, participate by filling out a basic demographics questionnaire, a propensity to trust measure, and experiences in close relationships scale.

IRB #16-08-033 Approved: 08/24/2016 Expires: 08/21/2017

How long should I expect this to take?
Participating in this study should not take longer than approximately 15-20 minutes to complete the 3 measures. Upon completion of the measures you will be asked if you have any further questions in which the researcher will answer any questions.

What are the risks involved with the study?
This study does not involve the administration of any medical procedures. There are no known physical risks with participation in the research protocol.

Psychological Stress
The experience of learning your propensity to trust and style of attachment may result in a variety of emotional experiences. One experience may result in a mild emotional discomfort. If during the process of answering questions, you feel uncomfortable you have the right to refuse to complete any or all assessments. You may also take a break and resume during participation.

Loss of Confidentially
There is limited personal identifying information within this research for upholding confidentially protocol. Every effort to will be made to keep your data confidential; however, in the event of an unforeseen compromise in the form of a breech in confidentiality, there is no guarantee of confidentially.

How will risks be minimized or prevented?
The researcher is knowledgeable and experienced in response to emotional and psychological difficulties. During this research study, if you experience any emotional or psychological difficulties you will be referred to appropriate service providers for interventions. To uphold confidentiality of personal information, the researcher will limit personal identifiers collected and stored within the research record. Your collected data will be maintained in a secure, doubled locked containment, and only the researcher will have access to your research record. When the study is completed and there is no longer a need to use the research, your collected data will be securely destroyed. All electronic data will be maintained on a secure, stand-alone hard drive, not connected to any network and accessible only to the researcher. All data sets used for data analysis will be de-identified and accessible only to the researcher.

What are my responsibilities during the study?
Your responsibilities include asking questions about anything that you do not understand, following the researcher's instructions, and reporting to the researcher any discomforts.

If I agree to participate in this study, will I be informed of any new risks that may be found during the study.
Yes, you will be informed of any new information as it becomes available during the study that cause you to change your mind about participating or that is important to your health and safety.

What are the potential benefits of this study?
Upon consenting to participate within the study you will receive an incentive for your time in the form of a $10 gift certificate. Your contributes may help individuals with Borderline Personality Disorder by improving current understanding and treatments.

What options are available if I decide not to take part in this research study?
This is not a treatment study. Participation in this study will not impact your medical or psychological care in anyway.

Will my information be kept confidential?
Personal identifying information about you that is collected for this study will remain confidential. Upon completion of the study the data collected from this research will be compiled and potentially published in the form of a doctoral dissertation at the University of Arkansas. Be informed that certain organizations may examine non identifying data to assure quality research integrity. Some of these organizations may include The University of Arkansas Institutional Review Board.

Who Do I call if I have questions or problems?
For questions about the study contact the principle researcher, Jacob White, at 479-301-0362. For questions about your rights as a research participant, contact the University of Arkansas Institutional Review Board (IRB) Office at 479-575-4572.

YOU WILL BE PROVIDED A COPY OF THIS CONSENT FORM TO KEEP.

Your signature below certifies the following:

You have read and understand the information provided above

You have received a better understanding to any questions that you may have prior to your participation.

You have freely decided to participate in this research.

You understand that you are not giving up any of your legal rights.

_____
Participant's Name (printed)

_____ _____
Participant's Signature Date

_____ _____
Witness Name Date

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Appendix E

Demographic Questionnaire

What is your age?

What ethnicity do you identify as?

What is your current relationship status?

What is the current relationship status of your parents?

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Appendix F

Propensity to Trust Scale

Introduction- This scale assesses the disposition to trust others, regardless of social and relationship-specific information (Mayer et al., 1995).
This Propensity to Trust Scale was created in 2013 by Frazier, Johnson, and Fainshmidt.

Procedure

The inventory consists of 4 items that must be rated on how characteristic they are of the subject. The test should not take most people more than four minutes.

Source: Frazier, M. L., Johnson, P. D. & Fainshmidt, S. (2013). Development and validation of a propensity to trust scale. *Journal of Trust Research*, *3*(2), 76-97.

Please circle your level of agreement on a 1-5 scale according to the following statements related to your tendency to trust. (1=strongly disagree, 5= strongly agree).

1). I usually trust people until they give me a reason not to trust them.

1	2	3	4	5
Strongly disagree		Neither		Strongly Agree

2.) Trusting another person is not difficult for me.

1	2	3	4	5
Strongly disagree		Neither		Strongly Agree

3). My typical approach is to trust new acquaintances until they prove I should not trust them.

1	2	3	4	5
Strongly disagree		Neither		Strongly Agree

4.) My tendency to trust others is high.

1	2	3	4	5
Strongly disagree		Neither		Strongly Agree

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Appendix G

Experiences in Close Relationships Scale

Introduction

Attachment style is how an individual behaves in relationships with other.
The ECR was created in 1998 by Kelly Brennan, Catherine Clark and Phillip Shaver. It groups people into four different categories on the basis of scores along two scales.

Procedure

The inventory consists of thirty-six that must be rated on how characteristic they are of the subject. The test should not take most people more than four minutes.
This test is found online at http://personality-testing.info/tests/ECR.php

Source:

Brennan, K.; Clark, C.; Shaver, P. (1998). Self-report measures of adult romantic attachment. In J. Simpson and W. Rholes, Attachment Theory and Close Relationships. New York: Guilford Press.

Please circle your level of agreement on a 1-5 scale according to the following statements related to your tendency to trust. (1=strongly disagree, 5= strongly agree).

I prefer not to show a partner how I feel deep down.

1	2	3	4	5
Strongly disagree		Neither		Strongly Agree

I worry about being abandoned.

1	2	3	4	5
Strongly disagree		Neither		Strongly Agree

I am very comfortable being close to romantic partners.

1	2	3	4	5
Strongly disagree		Neither		Strongly Agree

I worry a lot about my relationships.

1	2	3	4	5
Strongly disagree		Neither		Strongly Agree

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Just when my partner starts to get close to me I find myself pulling away.

1	2	3	4	5
Strongly disagree		Neither		Strongly Agree

I worry that romantic partners won't care about me as much as I care about them.

1	2	3	4	5
Strongly disagree		Neither		Strongly Agree

I get uncomfortable when a romantic partner wants to be very close.

1	2	3	4	5
Strongly disagree		Neither		Strongly Agree

I worry a fair about losing my partner.

1	2	3	4	5
Strongly disagree		Neither		Strongly Agree

I don't feel comfortable opening up to romantic partner.

1	2	3	4	5
Strongly disagree		Neither		Strongly Agree

I often wish that my partner's feelings for me were as strong as my feelings for him/her.

1	2	3	4	5
Strongly disagree		Neither		Strongly Agree

I want to get close to my partner, but I keep pulling back.

1	2	3	4	5
Strongly disagree		Neither		Strongly Agree

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I often want to merge completely with romantic partners, and this sometimes scares them away.

1 2 3 4 5

Strongly disagree Neither Strongly Agree

I am nervous when partners get too close to me.

1 2 3 4 5

Strongly disagree Neither Strongly Agree

I worry about being alone.

1 2 3 4 5

Strongly disagree Neither Strongly Agree

I feel comfortable sharing my private thoughts and feelings with my partner.

1 2 3 4 5

Strongly disagree Neither Strongly Agree

My desire to be very close sometimes scares people away.

1 2 3 4 5

Strongly disagree Neither Strongly Agree

I try to avoid getting too close to my partner.

1 2 3 4 5

Strongly disagree Neither Strongly Agree

I need a lot of reassurance that I am loved by my partner.

1 2 3 4 5

Strongly disagree Neither Strongly Agree

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I find it relatively easy to get close to my partner.

1	2	3	4	5
Strongly disagree		Neither		Strongly Agree

Sometimes I feel that I force my partner to show more feeling, more commitment.

1	2	3	4	5
Strongly disagree		Neither		Strongly Agree

I find it difficult to allow myself to depend on romantic partners.

1	2	3	4	5
Strongly disagree		Neither		Strongly Agree

I do not often worry about being abandoned.

1	2	3	4	5
Strongly disagree		Neither		Strongly Agree

I prefer not to be too close to romantic partners.

1	2	3	4	5
Strongly disagree		Neither		Strongly Agree

If I can't get my partner to show interest in me, I get upset or angry.

1	2	3	4	5
Strongly disagree		Neither		Strongly Agree

I tell my partner just about everything.

1	2	3	4	5
Strongly disagree		Neither		Strongly Agree

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I find that my partner(s) don't want to get as close as I would like.

1	2	3	4	5
Strongly disagree		Neither		Strongly Agree

I usually discuss my problems and concerns with my partner.

1	2	3	4	5
Strongly disagree		Neither		Strongly Agree

When I'm not involved in a relationship, I feel somewhat anxious and insecure.

1	2	3	4	5
Strongly disagree		Neither		Strongly Agree

I feel comfortable depending on romantic partners.

1	2	3	4	5
Strongly disagree		Neither		Strongly Agree

When I'm not involved in a relationship, I feel somewhat anxious and insecure.

1	2	3	4	5
Strongly disagree		Neither		Strongly Agree

I feel comfortable depending on romantic partners.

1	2	3	4	5
Strongly disagree		Neither		Strongly Agree

I get frustrated when my partner is not around as much as I would like.

1	2	3	4	5
Strongly disagree		Neither		Strongly Agree

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I don't mind asking romantic partners for comfort, advice, or help.

1	2	3	4	5
Strongly disagree		Neither		Strongly Agree

I get frustrated if romantic partners are not available when I need them.

1	2	3	4	5
Strongly disagree		Neither		Strongly Agree

It helps to turn to my romantic partner in times of need.

1	2	3	4	5
Strongly disagree		Neither		Strongly Agree

When romantic partners disapprove of me, I feel really bad about myself.

1	2	3	4	5
Strongly disagree		Neither		Strongly Agree

I turn to my partner for many things, including comfort and reassurance.

1	2	3	4	5
Strongly disagree		Neither		Strongly Agree

I resent it when my partner spends time away from me.

1	2	3	4	5
Strongly disagree		Neither		Strongly Agree