ATTACHMENT AND INTERPERSONAL RELATEDNESS AS MODELS PREDICTING SOMATIZATION, PHYSICAL HEALTH, AND UTILIZATION IN PRIMARY CARE

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Dedication

I am dedicating this work to my family, friends, colleagues, professors, and supervisors who have supported me beyond what is expected and who have provided me with a foundation to succeed. Their encouragement and support sows the seeds for what I am yet to discover and lights my path through the unknown and beautiful.

"As my study of theory progressed it was gradually borne in upon me that the field I had set out to plough so lightheartedly was no less than the one that Freud had started tilling sixty years earlier, and that it contained all those same rocky excrescences and thorny entanglements that he had encountered and grappled with—love and hate, anxiety and defense, attachment and loss."

-John Bowlby (1969/1982, p.xxvii)

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Chapter I: Introduction and Review of Literature

About 70% of patients enter into a doctor's office with a psychosocial issue (Robinson & Reiter, 2007). Often times, a mental health related problem may be underlying these visits (Collins, Hewson, Munger, & Wade, 2010). Doctors may not have the time or tools to cope with patients who demonstrate complicated presentations with vague psychological concerns (Collins et al., 2010). There is a growing interest in merging primary care and mental health services to address patients' psychosocial stressors. This is in response to many studies that have found correlations between physical and psychological health-related concerns (Collins et al., 2010). Because behavioral health in primary care is helping bridge the gap to work effectively with these patients, it is worthy to introduce models that can benefit this movement during such a critical time for psychology and medicine.

Attachment and Object Relations/Interpersonal Relatedness theories provide valuable information pertaining to how one understands and communicates their symptoms, their mentalizing capacities, and how they generally are in relationships. How one communicates their illness behavior is particularly relevant in a doctor-patient relationship which simulates an attachment relationship. Hunter and Maunder (2001) state that, "Attachment theory provides a unique, simple, and pragmatically useful model for understanding the particular ways that individuals can feel and react when stressed by illness, and how the professional may help manage that distress." (p. 177).

Illness is often associated with a need to be cared for by another (Hunter & Maunder, 2001). A need to be close to another can be displayed through varying

behaviors that perplex or frustrate healthcare providers. Thus, the purpose of this study is to determine the usefulness that attachment and object relations, as self/other models, have in understanding illness behavior.

Attachment

Attachment is a bond representative of early interactions that form internal working models of self and others for later adult life (Bowlby, 1969/1982, 1973). Such early bonds need to be sensitive, provide security, and exhibit protection and safety to promote a range of cognitive and social capacities for development (Fonagy, 2001). Lapses in these qualities can result in an excessive need for love or its counterparts: detachment, feelings of guilt, and depression (Bowlby, 1969/1982, 1973). These experiences are underlying constructs of attachment insecurity. One's early experiences with caregivers are critical to understanding one's internal and external world. The quality of these interactions are important to how we internalize our representational world as such representations are wrought with cognitive, affective, relational, and behavioral themes (Stein, Siefert, Stewart & Hilsenroth, 2011).

John Bowlby (1969/1982, 1973, 1980) observed disrupted relationships of maladjusted boys and their mothers. He discovered that children deprived of early maternal care were likely to experience severe disruptions in their functioning (Fonagy, 2001). He focused on actual events in a child's life and found that when a threat was present, an attachment behavioral system in the infant was activated and observable (Mikulincer & Shaver, 2007). The infant responded to threats with distress and when the threat was removed, they responded with relief or a sense of calmness.

In Bowlby's development of attachment theory, he described the importance of the caregiver's availability and consistency during these moments to instill confidence in the infant (Fonagy, 2001). Many different theorists have discussed aspects of attachment that serve as templates for personality development (Levy, Blatt, & Shaver, 1998) and some have detailed attachment patterns as stable personality structures (Mikulincer & Shaver, 2007). Further research is needed to help determine associations between attachment style, personality, and relationships in understanding such interactions (Mikulincer & Shaver, 2007).

Attachment theory sprung from the insufficiencies of the one-person drive model of psychoanalysis. The one person model states that drives are primary to understanding one's functioning and are described as the cornerstone to thoughts, actions, emotions, fears, and wishes (Levy & Blatt, 1999). However, this explanation was incomplete for theorists observing the contribution of relationships in one's development (Levy & Blatt, 1999). Breaking from the drive model was a challenge for many object relational theorists. Upon its development, attachment theory did not include the drive model, but channeled the critical nature that the affective bond in relationships provided (Levy & Blatt, 1999).

Placing Theory Into Action

A pioneer of the Strange Situation, Mary Ainsworth and colleagues (Ainsworth, Blehar, Waters, & Wall, 1978) observed infant (i.e., ages 1-2 years) and mother interactions to report important aspects of early relationships for subsequent child development. The Strange Situation itself was observed in a laboratory setting involving observations of mother and infant interactions, infant and stranger

interactions and the infant alone (Ainsworth et al., 1978). Four categories (i.e., securely attached, anxiously attached avoidant, anxiously attached ambivalent/resistant, and later disorganized/disoriented) were used to classify infant attachment style (Fonagy, 2001). These styles were placed into two categories of attachment: secure and insecure (Ainsworth et al., 1978). Her observational work propelled the concept of attachment theory as an empirically tested interaction of infant/mother dyads and subsequent development.

Fonagy, Gergely, Jurist, & Target (2002) stated that the outcome from the Strange Situation, which is reflective of the attachment system, is a template for adult interpersonal relationships. It has been widely accepted that attachment working models remain stable over time (Mikulincer & Shaver, 2007). However, some research has found instability in adult attachment patterns (Belsky, Campbell, Cohn, & Moore, 1996) which may be due to experiences in highly chaotic environments or in high-risk samples, thus influencing one's attachment category (Solomon & George, 1999). Mikulincer & Shaver (2007) state that one's working model, in response to attachment related experiences, may require continuous updating to adapt to changing environments, but that the stability of attachment patterns in adulthood tend to stay the same and variability may be subject to error in attachment measures.

Nonetheless, early experiences play a crucial role in one's development of self in relation to others. This begins with the notion that caregiver proximity promotes survival (Bowlby, 1969/1982) and that the attachment behavioral system is comprised of components which are key to survival.

Attachment Behavioral System

Bowlby (1969/1982) suggested that we each have an attachment system used to protect us in early life from danger by maintaining proximity to attachment figures. This becomes evident when proximity is sought especially in real or perceived dangerous situations. The crucial component is to attain particular set-goals that serve as advantages for individual survival (Mikulincer & Shaver, 2007). The process of set-goals determines when the attachment system is activated or deactivated and how it works in each of us (Mikulincer & Shaver, 2007). The attachment behavioral system is activated when one feels threatened and deactivated by a sense of protection, comfort, and/or "felt security" (Mikulincer & Shaver, 2007). If attachment figures are unpredictable, unavailable or inconsistent (physically or psychologically), then the infant alters his or her behavior to accommodate the need to achieve closeness to the figure. This accommodation is at a cost, however, to the reflective capacities of the infant/child (Fonagy et al., 2002).

Mikulincer and Shaver (2003) derived a control systems model of attachment in adulthood to reflect such experiences. They proposed their model as a system of early attachment ideals merged with current control systems models (Fraley & Shaver 2000; Shaver & Hazan, 1988). In addition to monitoring threats and caregiver availability, their model defined hyperactivating and deactivating strategies that are associated with attachment insecurity. These responses are also known as secondary attachment strategies and are used when internal security is *not* available (Mikulincer & Shaver, 2007). Hyperactivating and deactivating are particularly important because

they influence how one responds to distress as a result of poor mirroring by the caregiver.

Hyperactivation is one's hypervigilance to threats of security. These strategies result in overdependence on a relationship and anxious behaviors which are centered around excessive demands for care, typically leading to a wish to be enmeshed with others (Mikulincer & Shaver, 2007). Deactivation strategies reflect a distancing from threat and attachment related cues. These individuals meet their needs without reaching out to others. They also inhibit emotional states that are distressing or troubling as to not inconvenience the other (Mikulincer & Shaver, 2007). Feeney (1998) studied relationship-centered anxiety with these strategies in mind. Specifically, she looked at the emotional reactions to physical distancing in relationship partners. She found that when a romantic partner was physically absent, individuals who have an anxious attachment style experienced greater anxiety (Feeney, 1998). Thus, these experiences continue to influence behavior beyond infancy (Mikulincer, Gillath & Shaver, 2002). Additionally, the caregiver's sensitivity and own attachment style are critical aspects of proximity seeking (Mikulincer & Shaver, 2007). If one's pursuit for "felt security" is rejected or they experience inadequate mirroring from their caregiver (Fonagy, 2001), a potential to feel rejected in subsequent relationships persists. When an individual seeks care (i.e., primary care physician) from another, Bowlby's behavioral system suggests that there is always a potential for security to be compromised, whether real or imagined, due to the internalization of such experiences.

When the attachment figure serves as a secure base, which allows one to feel safe in their environment (Bowlby, 1988), there is room for exploratory behavior. However, removal of the caregiver evokes attachment behavior from the child (e.g., seeking, clinging, crying, protest) (Eagle, 1996). Following this behavior, if the attachment figure upon their return reciprocates the child's needs by soothing, touching, and holding; then the attachment behavior is strengthened with the adult (Fonagy et al., 2002).

Attachment Theory and Physical Distress

One's interpersonal patterns, especially one's attachment style, can affect physical health. This can impact their intensity of symptoms, health behavior, stress response, doctor-patient relationships, and healthcare utilization (Maunder & Hunter, 2009). It is evident that how one is cared for physically as an infant is important for their felt safety. Some have suggested that the attachment behavioral system is closely linked to stress physiology (i.e., a mismatch between behavior and physiological responses), particularly an insecure attachment style, and a dysregulation of stress response (Coplan et al., 1996; Maunder & Hunter, 2009). Further, attachment insecurity may impair physical health (Maunder & Hunter, 2009). For instance, if one is not physically cared for as a child, they may be at a greater risk for affective and anxiety disorders that increase stress reactivity in adulthood (Heim & Nemeroff, 1999). Further, continued psychic stress can lead to somatic dysfunction or contribute to other forms of physiological disease (McDougall, 1985).

Shedler and colleagues (1993, 2003) studied illusory mental health through clinical judgments which looked at how distressed people can deny their distress

which serves as a risk factor for medical illness. Specifically, the results indicated that participants with illusory mental health showed greater coronary reactivity and greater diastolic blood pressure reactivity than genuinely healthy participants (Shedler, Mayman, & Mains, 1993; Shedler, Karliner, & Katz, 2003). The results provide empirical evidence that psychological defenses have long-term physiological effects (Shedler, Mayman, & Manis, 1993; Shedler, Karliner, & Katz, 2003). Thus, dysregulation of distress can lead to feeling emotional turmoil through bodily responses. One's attachment style may influence how they understand and accept their distress. For instance, a major factor of the secure base is to prevent or reduce any kind of bodily harm, pain, and danger (Bowlby, 1969/1982). If one's distress is not met with proper empathy, then there may be a propensity for the infant to react with physiological responses to internal distress in order to summon the caregiver's care (McDougall, 1985). Davies, Macfarlane, McBeth, Morris, & Dickens (2009) found that participants who had an insecure attachment style experienced more chronic widespread pain than individuals without pain.

Internal Working Models

In adulthood, a close relationship partner can be defined as the "attachment figure" that provides security in times of danger. Early interactions with attachment figures take the form of mental representations that are called Internal Working Models (IWM's) which are present in adulthood (Bowlby 1969/1982). These cognitive-affective schemas of relationships influence whether one perceives themselves as worthy of attention, love, and care (model of self) and whether representations of others are comprised of trust and consistency (model of other)

(Griffin & Bartholomew, 1994). The self-other model of attachment encompasses the formation of one's sense of self and other, thus providing a critical role in one's relationship experience (Ciechanowski, Walker, Katon & Russo, 2002).

Further, the internal working model of the attachment figure is crucial to understanding their availability to the child's needs and whether the child is perceived as acceptable or unacceptable (Bowlby, 1969/1982). How accepted one feels by their attachment figure provides an understanding of their own self-worth. For a person to know that an attachment figure is available encourages them to trust the relationship and their environment, which is no less important for survival and healthy adaptation than nourishment through feeding (Bowlby, 1988).

While the working model of self and others has been replicated and supported in many studies (Bartholomew & Horowitz, 1991; Ciechanowski, Walker, Katon, & Russo, 2002; Collins & Read, 1990; Feeney & Noller, 1990; Hazan & Shaver, 1987; Shaver & Brennan, 1992; Shaver & Hazan, 1993; Shaver, Collins, & Clark, 1996; Stein, Siefert, Stewart, & Hilsenroth, 2010), there remain a multitude of questions regarding the definition and meaning of working models (i.e., stability, function, and interaction with the environment). Previous research has approached working models as having independent effects on thoughts, affect, and behavior regarding others (Pietromonaco & Barrett, 2000). However, a more accurate representation of working models of the self are developed in relation to others, not working separately from them (Pietromonaco & Barrett, 2000). Working models have been criticized for their simplicity, categorical nature, lacking specificity, and inability to be captured externally (Fonagy et al., 2002). However, proponents of attachment theory claim that

working models are complex and have multiple levels that are defined in four categories**,** (1) memories of attachment-related experiences, (2) beliefs, attitudes, and expectations about self and others, (3) goal-oriented tasks, and (4) plans to achieve goals (Collins & Read, 1994). Again, these descriptions may not take into account the magnitude of one's internal processes. It is thus best to remain critical of how IWM's are defined and understood in attachment research while being aware of their limitations.

A common assumption is that attachment working models and perspectives are similar to the social cognitive paradigm in that they both focus on how one understands and interprets their feelings and behaviors influenced by cognitive and affective structures (Levy, Blatt, & Shaver, 1998; Westen, 1990). However, Social cognitive research focuses more on experimental methods, normative samples, and addresses the nature and development of self-schemas and causality (Westen, 1990). Attachment is seen as most connected to object relations theory. The idea of attachment as a separate, but related construct is a paramount discussion throughout the present study. There are prominent associations among these theories, but it is best to detail specific attributes of attachment theory that are different from other developmental or psychoanalytic perspectives of early experiences. Attachment working models *are* affected by one's defenses, conflicts, wishes, and fears (Mikulincer & Shaver, 2007). However, Bowlby maintained focus on the social, relational, biological, and psychological effects of representations from early experiences (Fonagy, 2001). Additionally, there is a strong presence of how affect influences social schemas and is ultimately regulated in moments of tension

(Mikulincer & Shaver, 2007). The affect regulation system seems to be primary when taking into account secondary strategies during moments of threat (Mikulincer & Shaver, 2007). Along with the emotion regulation system, Bowlby (1969/1982) emphasized the goal-oriented task of working models in that they are meant to serve as accurate representations of the actual infant-caregiver relationship. Another component, as described earlier, is that working models are relational in nature and are organized in terms of self and other paradigms (Levy, Blatt, & Shaver, 1998).

Continuity and Influences of Infant-Caregiver Relationships to Adult Attachment

As stated, an assumption of attachment theory is that once formed, attachment patterns are relatively stable through adulthood (Bowlby, 1973). The attachment patterns formed in infancy and early childhood can provide structures for later attachment representations and behavior throughout one's life (Mikulincer & Shaver, 2007). Early theories on the predictability of adult attachment patterns were determined by working models formed during infancy, attachment-related experiences in childhood and adolescence and present attachment-related experiences (Mikulincer & Shaver, 2007). This representation (Mikulincer & Shaver, 2007) has since been altered to incorporate the changing environment (social, personal, familial), one's temperament, caregiver sensitivity, intergenerational transmission, personal change through developmental stages and the infant attachment pattern (Van Ijzendoorn & Bakerman-Kranenburg, 1997).

However, the stability of one's infant to adult attachment style classification is heavily debated and the research has produced mixed results. The argument is that only a moderate degree of attachment stability can be achieved due to life

circumstances that influence change (Mikulincer & Shaver, 2007). For instance, some researchers believe that attachment-relevant experiences (e.g., death of a spouse or a good marriage) can lead to substantial changes in attachment patterns (Mikulincer & Shaver, 2007). Additionally, the environmental and biological factors mentioned play a role in influencing attachment styles and patterns. An infant's innate temperament determines their degree of irritability, response to distress, and ability to be soothed when upset. Parental caregiving and parental attachment style are also significant determinants in an infant's attachment behaviors.

Waters, Merrick, Treboux, Crowell and Albersheim (2000), studied infants in the Strange Situation at 12 months and recontacted them 20 years later to administer an Adult Attachment Interview (AAI). The study found that 72% of participants received the same classification in early adulthood as they did in infancy. While a favorable percentage, an important finding in the study revealed that negative life events such as parental divorce, life-threatening illness, parent mental illness and physical and sexual abuse were connected to changes in those with different attachment classifications in adulthood (Waters et al., 2000). This finding suggests that significant negative life events can alter one's attachment style.

Hamilton (2000) recognized that in order to study continuity of attachment style, one must discover what processes influence change, beginning with the family unit. The study looked at conventional and non-conventional family contexts and found that change in attachment classification from infancy to adolescence was, to a degree, related to the presence or absence of negative life events (as described in Waters, Merrick, Treboux, Crowell & Albersheim, 2000). However, the presence of negative

life events was primarily connected to an early insecure infant attachment style. The findings determined that continuity of attachment was not specific to conventional families and that infant attachment classification was a significant predictor of adolescent attachment classification (Hamilton, 2000).

Fraley and Brumbaugh (2004) conducted a meta-analytic study of adult's attachment styles and compared it with a meta-analytic study which assessed childhood attachment. They found that attachment patterns were relatively stable throughout development (Fraley & Brumbaugh, 2004). Further, using the Mills Longitudinal study of women to assess continuity of attachment styles spanning 25 years, Klohnen and John (1998) found that stability of attachment working models was .60 or above. A compelling finding in this study is that when styles did change, preoccupied individuals were seen as increasingly more secure over time, where avoidant people were likely to stay in the same classification (Klohnen & John, 1998).

Alternatively, support of a consistent infant to adult attachment classification has raised concerns regarding the appreciation of developmental changes and personal characteristics that may reveal far more complex processes existing beyond an IWM. Davila and Cobb (2004) stated that attachment models are based on how the person perceives a situation. For example, something that causes stress is defined as "stressful" by the individual person and is interpreted differently for each person (Mikulincer & Shaver, 2007), thus making it difficult to determine collective attachment pattern changes. It has also been found that attachment security can increase during times of marriage and parenthood (Davila, Karney, & Bradbury,

1999; Crowell, Treboux, & Waters, 2002). Senchak and Leonard (1992) found that couples tended to get together based on their similarities in attachment style (e.g., attachment security) and this led to overall better marital satisfaction. For example, if an individual is predominantly secure in their attachment style, then a healthy marriage may further solidify this security.

Studies have found incongruencies in the classification of infant to adolescent and adult attachment. Baldwin and Fehr (1995) describe that 30% of individuals undergo changes in their attachment styles in adulthood. Lewis, Feiring, & Rosenthal (2000) looked at infant to adolescent classification and found that negative life events, such as parental divorce, led to discontinuity of attachment classification in adolescence. Overall, it is understood that one's internal representations and the role they serve as "felt security" throughout life remain important.

Romantic Love as an Adult Attachment Paradigm

Ainsworth's strange situation included the Nuclear Family Tradition and was expanded upon to form the Peer/Romantic Partner Tradition in adulthood (Simpson & Rholes, 1998). Discussed here will be the Peer/Romantic Partner Tradition. Romantic relationships are similar to infant-caregiver relationships and are subsequently studied as such (Feeney, 1998). Ainsworth's secure and insecure attachment patterns have been observed in adult romantic relationships (Feeney, 1998). Hazan and Shaver (1987) acknowledged that adult relationships are different from infant-caregiver relationships, but settled on the inevitable influence that romantic love had in the attachment process through which relational bonds were developed.

Researchers discovered that attachment styles were connected to important relationship attributes such as commitment, satisfaction, trust, and length of relationship (Simpson & Rholes, 1998). There has been research on reliable connections between attachment styles and the quality and stability of one's relationships (Feeney, 1998). Simpson and Rholes (1998) observed social interactions of adult romantic attachments. They found that women with more secure romantic attachment styles felt supported by their partner and turned to them in times of need, where avoidant women withdrew from their feelings and from their partner during times of distress. Feeney and Kirkpatrick (1996) studied the effects that the presence or absence of a romantic partner had on physiological reactions to stress. Participants completed a stress task with the presence and absence of their romantic partners. They found that avoidant and anxious participants displayed heightened physiological responses (i.e., increased heart rate and blood pressure) across all conditions if the partner-absent condition was administered before the partner-present condition (Feeney & Kirkpatrick, 1996). This poses a great consideration to partner involvement on reducing anxiety when present and producing anxiety when separation in a stressful environment occurs. Further, this supports the main concept of attachment theory: that attachment figure unavailability is inherently distressing (Feeney, 1998; Mikulincer & Shaver, 2007).

Adult Attachment Styles: A Four Category and a Two-Dimensional Model

Attachment styles are described as patterns which encompass needs, emotions, social behavior, expectations, and beliefs about one's self and close relationships (Fraley & Shaver, 2000). These styles are strongly connected to IWM's and reflect

the quality and organization of certain attachment strategies (i.e., hyperactivating and deactivating) (Mikulincer & Shaver, 2007). Bartholomew (1990) placed Bowlby's idea of IWM's into a classification of four attachment patterns (e.g., secure, preoccupied, dismissing, and fearful) fitting a two-dimensional system (anxious and avoidant) in adult romantic attachment (Figure 1).

Secure attachment is reflective of a caregiver who was responsive to the child's needs. This is represented in adult relationships by trust in partners and expectations of partner availability, feeling comfort when close to others, and the ability to cope with stressors in adaptive and healthy ways (Mikulincer & Shaver, 2007). The secure attachment style represents a combination of a positive model of the self and a positive model of the other. Individuals with a preoccupied attachment fear abandonment and rejection, often needing to be excessively reassured of their importance. They see the other in a favorable light and themselves as unworthy unless the partner is available and consistently responsive. These individuals seek acceptance from another to maintain security. This style is often associated with the notion that attachment figures were not able to be counted on for support as an infant (Rholes, Simpson, & Stevens, 1998).

Individuals with a Dismissing attachment style maintain distance from others to protect their positive value of self. They are compulsively self-reliant and their distancing approach to relationships leads supports their denial that others are important. However, this approach interferes with their capacity to seek close relationships with others (Bartholomew, 1990). As infants, they do not exhibit much distress upon separation from the caregiver, but they experience a great degree of

physiological arousal (Fonagy et al., 2002). This style is a positive model of the self, but a negative model of the other and has its roots in overstimulating or rejecting caregivers (Fonagy, 2001; Rholes, Simpson, & Stevens, 1998). Fearful attachment is described as a negative model of self and others resulting in a need for others care, but fear of this care being inadequate. This may have implications for many relationships, particularly in settings where one is seeking care (i.e., primary care doctor). Often, these individuals reject the care they initially sought out. These individuals were likely met with an inconsistent caregiver as an infant.

In order to measure the IWM's and behavioral systems of infant relationships in adulthood, various procedures were adopted. These procedures were used to capture the social and emotional aspects of adulthood derived from IWM's in infancy (Bartholomew & Horowitz, 1991). For instance, the AAI is an interview of adult representations of childhood attachment behaviors and current attachment classifications. When mother's were interviewed using the AAI, their attachment classifications were found to be predictive of the quality of interactions with their child (Bartholowmew & Horowitz,1991). A measure of adult romantic/close relationships is another method of differentiating attachment classification. Hazan and Shaver (1987) developed a self-report measure to channel the theory on romantic relationships and its connection to adult attachment style (Bartholomew & Horowitz, 1991). These multi-method approaches at different developmental junctures encompassed aspects of an avoidant style that could be split into two categories, one where the individual downplays the importance of relationships (Dismissing) and the other where an individual wants to be emotionally close to others, but fears rejection

(Fearful) (Bartholomew & Horowitz, 1991). Therefore, the four category model has tapped into common attachment styles derived from these two methods.

In recent research, there has been an emphasis on a dimensional model of attachment insecurity that underlies the self-report measures of romantic attachment (avoidance and anxiety) (Bartholomew, 1990). The avoidant dimension engenders discomfort with being close to others, maintaining one's distance in relationships and being independent in most endeavors. The anxious attachment dimension takes into account the need to be close to others to maintain security and protection, continuous reassurance that one is needed and important, and concerns about partner availability (Mikulincer & Shaver, 2007).

Klohnen and John (1998) stated that most people are likely to exhibit complementary models of self and other (i.e., the secure style (positive self and other) or the fearful style (negative self and other). The reason for this may be due to the complexity that exists within preoccupied and dismissing styles. This implies that there are unconscious processes at work, processes that are "cut off" from awareness in order to maintain balance. In other words, an individual may be using defenses against unwanted thoughts and feelings to function within their typical attachment style (Klohnen & John, 1998). They may be unaware of their internal conflicts and this leads them to continue functioning within their working model. This perspective supports the hyperactivating and deactivating strategies often employed in attachment insecurity (Mikulincer & Shaver, 2007).

Figure 1. Model of Adult Attachment Styles as Four Category and Two Dimension Configurations (Model of Self and Model of Other). (Bartholomew & Horowitz, 1991).

	Model of Self (Anxiety)	
	Positive	Negative
Positive *Model of Other (Avoidance)*	**SECURE** Comfortable with intimacy and autonomy	**PREOCCUPIED** Preoccupied with relationships
Negative	**DISMISSING** Dismissing of intimacy Counterdependent	**FEARFUL** Fearful of intimacy Socially avoidant

Through development, one's attachment style has the potential to be perpetually reinforced. Bowlby (1969/1982) stated that one will often attract individuals who fit their working models of others and thus solidify their working model as a general representation of how they are in close relationships. This reinforcement shapes how one experiences present and future relationships (Bowlby 1969/1982). This is one explanation of predicting adult attachment patterns. While people may adapt new information to existing models, they can additionally reshape these models through new information regarding appropriate attachment information. For example, one can become aware of their own self-worth through a caring partners acceptance of previously unaccepted behavior by an attachment figure (e.g., sensitivity to rejection) (Mikulincer & Shaver, 2007). Beyond the thought that one's attachment system is activated only at times of threat, it can also be suggested that one's attachment system is in motion most of the time, influencing social situations and internal processes

(Klohnen & John, 1998). Thus, attachment style is explained and understood as a representation of this idea.

Affect Regulation

Affects are emotional responses to internal and external stimuli. Bowlby's earliest observations and hypotheses surrounded the affectional bond between mother and infant, noting that deprived children appeared "affectionless" (Bowlby, 1944). He viewed proximity seeking as an innate strategy in managing one's distress or affect (Mikulincer, Shaver, & Pereg, 2003). Bowlby did not explicitly integrate affect into his theory, but the origins of attachment theory imply that insecure individual's are viewed as having a dysregulation of affect, as experienced through their caregivers who have an insecure attachment style (Bowlby, 1973). Subsequently, the role of affect has become more complex in modern attachment theory with an emphasis on management of emotions (Sroufe, 1978).

The concept of affect regulation has acquired many definitions in the field of psychology (Fonagy et al., 2002). Theorists have described affect regulation as a capacity to grasp one's emotional experience situationally (Gross, 1999) and further to appreciate the relational influence of emotional experiences as a factor in one's mentalizing capacity (Fonagy et al., 2002). There has also been an attempt to detail the many possibilities of one's internal emotional experience, including the neurophysiological underpinnings of emotional arousal (Thompson, 1990). In attachment theory and psychoanalysis, affect regulation is defined as the capacity to remain organized and calm in moments of tension (Sroufe, 1978). The process of regulation is internalized through the infant-caregiver relationship and is thought to

be an interaction that serves as a resource for later regulation of affect for the person (Sroufe, 1990). Confidence in the caregiver is translated to feeling confident in one self thus moving from the infant-caregiver dyad to a sense of self-esteem and independence (Sroufe, 1996). Being aware that we do not always know what or how we feel is a component of affect regulation (Fonagy et al., 2002).

If not adequately modeled, the interaction of the attachment system combined with attachment-related experiences may result in the development of maladaptive ways of managing affect (Bowlby, 1982/1969, 1973). Cassidy (1994) made connections between affect regulation and the quality of attachment stating that when proximity is not achieved there may be a propensity to overregulate one's emotions by minimizing ones affective responses (i.e., avoidant style) or underregulate them by experiencing increased physical and mental arousal (i.e., anxious style). The response to negative affect for an avoidant individual suggests that they are resistant to express emotion, but this does not exempt them from feeling the emotion. Where the anxious individual expresses their emotions excessively and persistently.

Attachment and affect regulation bring to light how one handles and recovers from stressful situations. If attachment figures are responsive to the child's needs, then the child will adopt strategies reflective of comfort and support. If attachment figures are unresponsive, then the child can experience labile emotional responses to this type of interaction. Mikulincer, Florian, and Weller (1993) studied one's response to distress regarding missile attacks that occurred during the Gulf War. The results indicated that there were differences in responses to such distress for secure and insecure groups. Avoidant and anxious-ambivalent individuals reported a higher

degree of somatization, anxiety, depression and hostility than their secure counterparts (Mikulincer et al., 1993). More specifically, avoidant individuals were found to suppress their symptoms (i.e., anxiety and depression), but expressed their distress indirectly through higher symptom reporting (i.e., somatization) and anger responses (Mikulincer & Florian, 1998). Ciechanowski et al. (2002) determined that individuals with a negative self model (i.e., preoccupied and fearful) have a tendency to focus on negative affect. Further, studies have shown that negative affect is associated with more general health complaints (Costa & McCrae, 1987; Russo, Katon, Lin, Von Corfu, Bush, Simon & Walker, 1997; Watson & Pennebaker, 1989). Wearden, Lamberton, Crook, and Walsh (2005) found that fearful and preoccupied attachment styles were connected to increased symptom reporting and negative affectivity. These styles represent a negative model of self.

Self- Report Measures of Attachment

Self-report measures of attachment are designed to assess separation, loss, self-reliance, dependence, trust and security (Maunder & Hunter, 2009). The development of the adult attachment prototypes of secure, anxious and avoidant styles are represented in the following measures: The Adult Attachment Questionnaire (Simpson, 1990), Adult Attachment Scale (Collins & Read, 1990), Attachment Style Questionnaire (Feeney, Noller, & Hanrahan, 1994). As mentioned, Hazan and Shaver (1987), took a social psychological approach to measuring adult romantic love and connected it to adult attachment patterns. Their approach to measuring attachment styles in adulthood utilized Ainsworth's description of secure, avoidant, and anxious-ambivalent attachment. Hazan and Shaver's (1987) discovery of links between

romantic love and attachment and connected them to Bowlby's idea that representational models of self and others are foundations for these styles (Levy & Blatt, 1999).

The Relationship Questionnaire (RQ) was constructed to define the anxiety dimension as a model of self and the avoidance dimension as a model of other, thus elaborating on the two-dimensional system of adult romantic attachment by introducing the four category model of attachment (Figure 1) (Bartholomew & Horowitz, 1991). In one study, the researchers examined subject's descriptions of their close friendships and romantic relationships. The RQ was apart of a protocol of attachment measures (e.g., self-report and interview) and attachment styles were assessed based on these descriptions and determined important relations to their everyday social functioning (Bartholomew & Horowitz, 1991). The results indicated that ratings of the four attachment styles were related to the model proposed (Bartholomew & Horowitz, 1991). Thus, the RQ was effectively used as a valid and reliable measure for attachment research and has been used subsequently in a variety of studies (Mikulincer & Shaver, 2007). Further, the Experiences in Close Relationships scale assesses similar concepts and will be described later in more detail.

Attachment and Psychoanalytic Theory

Attachment has its origins in psychoanalytic theory, particularly object relations theory (Levy & Blatt, 1999). The commonalities between attachment and psychoanalytic theory surround the emphasis on early experiences, especially in one's development of self and relationship with others (Fonagy, 2001). Similarly,

attachment theorists agree with the psychoanalytic perspectives that much of mental life is unconscious, there is a strong emphasis on social, cognitive, and affective processes working together, mental representations of self and other contribute to one's personality development, and mental representations of self and other are crucial to understanding how one interacts with others (Westen, 1998).

There is a difference between attachment theory and psychoanalysis in that attachment is focused on real experiences that are formed around working models of self and others which interact with affective and cognitive processes as well as relationship outcomes (Mikulincer & Shaver, 2007). Contemporary psychoanalytic theory holds that mental representations of self and other are based on internalizations from childhood (Mikulincer & Shaver, 2007), but there is a strong emphasis on infantile fantasy, mental representations of self and other, free associations, dreams, and transference (Levy & Blatt, 1999). However, Attachment more literally takes into account the actual experiences of the relationship. Therefore, in attachment there has been a stronger focus on the real life experiences of the child, rather than the fantasy.

Fonagy and colleagues (2002) defined the concept of mentalization in recognizing the mental states in self and others. Thus, they conclude that the capacity to mentalize is crucial in self organization and affect regulation. For example, secure attachment can be seen as the outcome of successful internalization of the other, while insecure attachment shows the infant's identification with the caregiver's defensive behavior (e.g., uninvolved, anxious or smothering). In insecure attachment, the caregiver may not have developed their own capacity to mentalize or they may exhibit disorganized and unpredictable behavior towards the child. The infant internalizes the caregiver's

attitude and these inconsistencies become the experience of the self (Fonagy et al., 2002). Thus, how one establishes a relationship with their caregiver may be related to how they cope with stressful life events.

Consistent with what has been discussed thus far, mentalization is integrated in early child relationships (Fonagy, 2001). Further, it has been researched that the mother may avoid reflecting the child's affect and thus be cast into an ever present pretend mode, not representing external reality for the child. The mother may panic during the child's distress, avoid their distress, or interpret it as illness (Fonagy, 2001). If the mother interprets the child's distress as illness, then there is a possibility of dismissing the child's communication of internal distress and interpreting it only in physical terms. The physical state is then what is real and is at risk for only being identified in this way.

Attachment and the Body

The attachment system is very closely connected to health related conditions for an individual and in turn has an intimate connection to one's body. As noted, the attachment system is activated when threats such as dangerous conditions in the external environment and separation from an attachment figure is anticipated. Additionally, the attachment system can be activated when one is experiencing internal distressing conditions such as sickness or pain (Mikulincer & Shaver, 2007). The early experiences between mother and child may represent how one handles regulation of their emotions. If the child learns to stifle their emotions, due to the unacceptability of such expression or rejection from the parent, then the child will have less awareness of their own internal emotion states. Another way the expression

of emotions is seen as unacceptable is that the child may not have adequate emotional space to experience as their own. From a conceptual level, the body can be used as a way of expressing emotions that are unacceptable to be recognized consciously (McDougall, 1985).

In terms of attachment and the body, it can be hypothesized that how one perceives or doesn't perceive their bodily reactions to stress is a factor in how they were cared for during the critical attachment stage as an infant. Fonagy and Target (2008), explored the embodied cognition approach to understanding attachment. Specifically, they stated that the quality of one's attachment (i.e., attachment security or insecurity) can be studied verbally, but also through bodily action to assist in fully understanding the symbolic nature of one's cognitive functioning and interactions. Further, they criticized the neglect, contrasting psychoanalysis, that early attachment hypothesis and current attachment research has on the importance of bodily experiences (Fonagy & Target, 2007). Attachment begins in a physical state, seeking proximity to an available caregiver, and encompasses a body-oriented connection to mental processes (Fonagy & Target, 2007). They elaborated from infant attachment to the body-mind associations present in adult narratives. For instance, it was discussed that one's attachment style (i.e., avoidant) is not simply described in dismissive terms, but is a multilayerd structure of emptiness or a narrative devoid of feeling. Thus, the avoidance representative of an austere infant-caregiver relationship is palpable and mimics the metaphoric and literal "reaching out" to an absent or rejecting caregiver. The intention behind embodiment is to incorporate the obvious

bodily connection involved in early attachment relationships (Fonagy & Target, 2007).

Individuals experiencing actual or anticipated physical pain will likely differ in their attachment styles which in turn reflect their responses to physical problems (Mikulincer & Shaver, 2007). Those who have a secure attachment style may look to understand their physical symptoms and regulate their distress. However, individuals with an insecure attachment style will likely focus on the distress itself, rather than taking care of physical concerns. It has been demonstrated that anxiously attached individuals experience more physical problems than other styles (Mikulincer & Shaver, 2007). McDougall (1985) stated that an overly good mother, similar to the "not good-enough mothering" Winnicott proposed, would lead the child to experience psychic abandonment. Thus, the child experiences unempathic responses to their mental pain. However, there may be certain attention to bodily pain and physical symptoms that the mother provides to their child (McDougall, 1985). Further, it has been noted that the intensity of one's somatic symptoms are more prevalent when a patient feels threatened by loss or abandonment (Verhaeghe, Vanheule, & De Rick, 2007). This "action model" of regulating affects may have its roots in deficient caregiver mirroring resulting in poor psychic representation and a dependence on the physical presence of another (Fonagy et al., 2002). Verhaeghe et al. (2007) states that "When attachment figures are preoccupied with physical illness, manifestations of arousal in a child will easily be translated as indicative of illness, and not as affective responses." (p. 1326).

Early Deprivation and Physiology

Harry Harlow (1962) studied attachment related behaviors in rhesus monkeys. He found that the attachment system was activated in these monkeys when a threat was perceived and deactivated when they sought care from a maternal cloth monkey. The neurobiological consequences of early stress and childhood deprivation has shed light on the long-term effects of stress on one's physiology (Teicher et al., 2003). Teicher and colleagues (2003) describe that early maltreatment can leave one vulnerable to prolonged stress responsiveness and affect brain development. For instance, stress can result in neurogenesis, synaptic overproduction and pruning, and myelination during critical developmental stages. Further, changes in corpus callosum size, the hippocampus and the amygdala are consequences of prolonged stress, in addition to extended electrical firing in the limbic system (Teicher et al., 2003).

Meyer, Novak, Bowman, and Harlow (1975) studied mother-reared and surrogate-peer-reared rhesus monkeys that were separated from their attachment figures at 6 months of age and tested, for approximately 2 months, to determine their behavioral stress responses in addition to the hormonal effects of this separation. Specifically, the researchers were looking at the monkeys home cage behavior and pituitary-adrenocortical responses to stress (Meyer et al., 1975). They found that the mother-reared infants developed stereotypic behavior patterns such as repetitive pacing. Both groups demonstrated increased cortisol levels in stress situations, with the mother-reared infants having more prolonged stress to the loss of their mother figure.

Further studies measuring plasma cortisol in rhesus monkey infants revealed that mother-reared and peer-reared infants demonstrated higher cortisol levels in response to separation and 30-minute isolation (Shannon, Champoux, & Suomi, 1998). These findings can be translated to the importance of understanding how early neglect links to physiological responses to stress and in turn affects one's mental and physical health through development (Repetti, Taylor, & Seeman, 2002).

Object Relations Theory/Interpersonal Relatedness

The term object relations can be defined as one's interactions with external and internal (real and imagined) others (Greenberg & Mitchell, 1983). A common understanding is that while there is convergence between attachment theory and object relations theory, there is a critical difference in that object relations theory remains predominantly rooted in the drive model. The very definition of the word "object" is one's different experiences with others (Greenberg & Mitchell, 1983). A central component to the object relations model is the concept of mental representations of self and other. Mental representations are structures that are influenced by cognitive and affective schemas (Levy & Blatt,1999).

These structures often exist from early life and retain their influence throughout one's development. Further, components of one's internal life such as impulses, affects, drives, and fantasies are integrated into these structures (Blatt, 1974; Sandler and Rosenblatt, 1962). What is important about these internal images, is their residue within the mind of relationships with important people in one's life (Greenberg & Mitchell, 1983). Additionally, there is a strong cognitive and affective emphasis that influences such mental representations. Representations of self and others are

developed and formed in early interpersonal interactions. As such, they unfold as the infant matures through development and constructs mature cognitive-affective schemas. As these schemas mature and eventually organize, shape and guide behavior they become guides for later interpersonal interactions (Blatt, Auerbach, & Levy, 1997).

Object relations theory's concept of mental representations is generally seen as synonymous to attachment theory's idea of internal working models. It is important to recognize that mental representations hold a similar connection to internal working models of self and other in that they both emerge from early relationships and act as templates for later development and interpersonal relationships (Blatt & Levy, 2003). What has been relevant to research more recently is how object relations and attachment are closely linked. More specifically, an interest has been in how representational structures contribute to attachment behavior (Westen, 1991). A place to begin is the background of object relations theory and its progression toward focusing on the importance of people in our lives and how these people influence our cognitive representations, becoming object representations in our minds (Westen, 1991).

Object relations theorists declare that early deprivation, abuse, and/or neglect from caregivers contributes to later dysfunction in internal processes and interpersonal relationships. Further, they hypothesize the importance of experiencing desired relatedness with important caregivers in their lives. This is crucial to understanding that reciprocation from others leads to the development of one's personality. There is an understanding that unempathic experiences from others

coupled with anxiety provoking interactions lead to disruptions in personality (Westen, 1991).

Object relations theorists have shaped the understanding of development and pathology in regards to interpersonal relatedness (Fairbairn, 1952; Klein,1948; Sullivan, 1953). Klein's (1948) theory provided a detailed hypothesis regarding the focus of object representations. Fairbairn (1952) fled from the drive model and embraced the concept that what one needs is relatedness with another. Margaret Mahler focused on the importance of the strong mother-child relationship as a vehicle for the child's healthy development of self. Mahler emphasized that adaptation is most relevant in early infancy where the infant simply must adapt to his/her environment because they have to. The question is how well this infant adapts to their environment with the help of caregivers (Mahler, Pine, & Bergman, 1975).

Sullivan introduced the "good me", "bad me" and "not me", suggesting that a healthy infant fluctuates between "good me" and "bad me" and an infant who has been unempathically tended to channels these unacceptable parts of the self outside of the self, the "not me". It is with Sullivan where the introduction of affect in representations of the self and others became a critical component to the object relations paradigm (Westen, 1991). As mentioned, affect is an important concept within attachment, where Bowlby (1969/1982) suggested that attachment is a critical motivational system mediated by affect (Westen, 1991). The bridge between object relations theory and attachment did not emerge until much later, however, as attachment theory was given minimal relevance in most psychoanalytic groups (Westen, 1991).

In the object relations paradigm, Kohut and Kernberg, have expanded object relations theories to understand further personality organization and levels of pathology. Kernberg proposed a developmental model on a continuum in order to locate the patient's level of disturbance at a certain part of their development (Kernberg, 1975). Kohut developed self-psychology and expanded his theory into the idea that problems arise when the caregiver optimally fails to empathize and respond consistently to their infants needs (Kohut, 1971). As a result, the child has a poor differentiation of self and other (Westen, 1991). A summary of these theories within object relations provides insight into the gradual development of the theory as it simultaneously derived and parted from the classical approach of the drive model. This is a concise overview of object relations theory as it leads us into the important discussion of mental representations and their ever present role in one's development and relationships.

As briefly described, mental representations are defined as internalized ideas and images about the self, others, and the relationship between them. These representations have strong connections with one another and are present in conscious and unconscious mental processes. Specifically, they are subject to change based on development and fantasy, holding key information regarding the structure of interpersonal functioning. The similarities and differences between attachment's internal working models and object relations mental representations will be discussed in another section. However, it is important to discuss mental representations in this section as a separate category derived from interpersonal experiences.

Social Cognition and Object Relations

Social cognition is a broad concept and exists in many areas of conceptual thought. Primarily, there is a focus on the model of the mind as a computer with a social psychological connection to cognition. The definition provides an assessment on how we receive information about other people and how we interpret this information. The information is meaningful in a social context and is likely based on our earlier experiences with others (Pennington, 2000). The cognitive processes comprise of a focus on schematic processing; including encoding, attention, retrieval and other processes. With schematic processing, there is a focus on how information is processed (Westen, 1991) and how social information is analyzed by the person (Pennington, 2000). Here, social cognition will be described in conjunction with object relations as a way to highlight their key determinants in the study of mental representations. The underlying commonality between social cognition and object relations theory is that they are both interested in how mental representations of self and others are formed and encoded (Westen, 1991). Further, there is a deeper need to understand cognitive and affective aspects of such information in tandem (Westen, 1991).

One reason for the collaboration of these two constructs begins with the recognition that unconscious processes are working beneath conscious thought and actions. For example, one may have a self-schema that they are "bad" in situations where they feel they've failed. To identify this schema without understanding affective quality or conflictual unconscious processes may be important missing information. It is thus understood that unconscious affective processes can distort

information processing (Niedenthal & Cantor, 1986). As such, it is natural to understand the social and cognitive paradigm, established in research, by expanding on important concepts within these models.

Westen (1991) detailed accounts of how object relations can better inform social cognition, by making it known in a very convincing argument that it is almost neglectful to dismiss the obvious role unconscious and conscious affect has on cognition. Thus, important conceptual components involved include, but are not limited to; complexity of representations, affect-tone of relationships, capacity of emotional investment in relationships and moral values, and social causality (Westen, 1991).

Affective Quality and Affect Tone

Westen (1998) notes that mental processes which involve affective and motivational qualities can exist conflictually within a given situation. Thus, affective processes are very important to one's motivation and response in daily decisions and/or life changing moments. This discussion warrants further explanation of the importance that affect plays in relationships in general. As noted earlier, affect regulation can be seen as a crucial mediator in forming attachment relationships and bonds. Thus, further description of affect allows one to examine the complexity of each theory and the mental processes working within them.

Undesirable affect, as described by the drive model, was experienced by a breaking through of repressed ideas into consciousness (Greenberg & Mitchell, 1983). Affect was seen as a primary motivating factor regarding conflict (Greenberg & Mitchell, 1983). It can be understood from the early workings of the drive model

that when affect was present, something conflict ridden was not being adequately repressed. The role of affect was increasingly understood (i.e., signal anxiety), although still secondary to the drives, as a critical determinant of symptom formation. The origin of affect can help understand the theoretical development it holds in contemporary object relations theory.

A crucial aspect missing within Freud's affect interpretation is a consistent and developing interpersonal component present for why affects arise (Greenberg & Mitchell, 1983). Edith Jacobson (1953) reintroduced affect in terms of interpersonal significance in which pleasure is experienced (Greenberg & Mitchell, 1983). Relatedly, Kernberg (1975) emphasized affect tone as characteristic of representations that originate from relationships to primary caregivers. His emphasis on affect is important to the process of differentiation and integration (Blatt & Levy, 2003) and thus forming complex and mature relationships.

Westen (1998) discussed a multitude of research studies that exhibited a central hypothesis that people can feel things without knowing they feel them and these feelings can be intense and elicit reactions that may be described as "unexplainable". Beginning from the early stages of development, an "adequate" response from caregivers requires interpreting the infant's physical expressions and presenting a meaningful way to communicate such expressions (Winnicott, 1956). If there is an absence of this meaningful communication, then one's inner experiences are misunderstood and they may find alternative ways of expressing their psychological experiences (Fonagy, 2001). It has been noted that the quality of one's early relational history is critical to how one can manage their emotions (Kobak, 1987), express their

emotions to others and regulate their bodily needs and states (Beebe & Lachmann, 1994).

Emotional Investment in Self and Others

Emotional investment is being personally involved with others where one's emotional state plays a part in the progression toward goals (Westen, 1991). This requires maintaining personal value in a relationship, suggesting that the individual has a capacity to invest emotionally in other people with maturity. Such investment involves cognitive processes (i.e., the identification of a goal state) that are important to the structure and foundation of a deeper commitment (Westen, 1991). Frijda (1988) described the laws of emotion stating that emotions are responses derived from meaning structures. Certain emotions are present in certain situations and thus exist in different meaning structures. Similarly, Frijda (1988) noted that emotions are present in response to events that have personal importance to the individual. Emotions themselves can be described as states in which there is a sense of momentary change. Frijda (1988) describes this as action readiness. Emotional investment requires the capacity to adapt in order to reach one's goals or adjust to unplanned situations. The degree to which one can maintain emotional maturity influences their depth of involvement in managing themselves in relation to others.

Different cognitive and affective processes mediate one's functioning in early and later relationships (Westen, 1990). Kohut determined that a "Selfobject" phenomenon takes place between infant and caregiver. That is, the caregiver serves to provide a sense of cohesion, constancy, and resilience for the infant (Greenberg & Mitchell, 1983). The child experiences feeling states of the selfobject and how the parental

figure interacts with the child through tone of voice and physical touch. This interaction mimics the caregivers emotional involvement with the child (Greenberg & Mitchell, 1983). When this type of interaction does not take place (i.e., inconsistent parenting, abuse, parental alcoholism), there are disruptions in one's object world suggesting the child may have been used to meet the parents needs. An object world that feels dangerous sets the stage for serious pathology (Kernberg, 1975, Porcerelli et al., 2006).

Complexity of Representations of People

Integrating affective and cognitive themes suggest that representations of self and others are epigenetically based (Diamond, Blatt, Stayner, & Kaslow, 1991). Thus, there is a building upon cognitive structures and representations of self and other that become more accurate and rational (Diamond et al., 1991). One's complexity of representations is presented in varying degrees and has been explained historically as the development of a realistic and increasingly differentiated integrated sense of self and identity (Blatt, 1974; Blatt & Wild, 1976; Westen, 1991). Additionally, there is a sense that the development of a capacity to establish increasingly mature and empathically attuned mutual relationships lays the groundwork for establishing more complex and satisfying interpersonal experiences (Blatt, 1990).

Mature representations allow for one to integrate positive and negative components and tolerate their conflicting feelings surrounding themselves and others. One who can integrate these representations in a mature manner has the capacity for complexity in their understanding of self and others (Blatt & Levy, 2003). Feldman and Blatt (1996) described this process as relatedness and self-definition. Specifically,

they stated that concepts of self and of others develop through the interactions of these two concepts. What this looks like is emerging levels of complexity of self and interpersonal relatedness. This process creates differentiation between self and others (Feldman & Blatt, 1996). It thus contributes to the understanding that personality development involves the capacity to form intimate interpersonal relationships.

Theorists have assessed the basic dimensions of self and object representations and concluded that the developing representations included the self-other differentiation process and establishment of mature levels of interpersonal relatedness (Blatt & Levy, 2003). Diamond et al. (1991) developed the Differentiation-Relatedness scale which looked at these processes. At the highest level one experiences creative, integrated constructions of self and other while remaining in tune to the others needs. At the lowest level, the self-other boundary is compromised at the most basic level, the physical level. For instance, there is a lack of understanding and boundaries of fundamental body awareness, emotions, and thoughts (Blatt & Levy, 2003).

Social causality determines how one understands events by the degree of logic, reflective capacities, and accuracy of people's thoughts, feelings and behaviors (Porcerelli et al., 2006). This is especially important given the flexibility that is needed when one explains the meaning of cause and effect in understanding human behavior.

A measure of social cognition and object relations was first developed by Westen and colleagues (1990) and then expanded upon by Stein and colleagues (2011). The expansion led to development of the Social Cognition and Object Relations Scale-

Global rating method (SCORS-G). The development was to create a more comprehensive and systematic account of one's inner object world regarding affective and cognitive processes. These additional dimensions include: Capacity for Emotional Investment in Relationships, Experience and Management of Aggressive Impulses, Self-Esteem, and Identity and Coherence of Self (Stein, Slavin-Mulford, Sinclair, Seifert & Blais, 2011). They were included to tap into different aspects of object representation that are considered important to understanding further one's self and other functioning.

Early Memories

Freud postulated that through screen memories one is recalling a past event that is reflective of many present experiences (Freud, 1899/1962). The concept of early memories was understood clinically by Alfred Adler as one of the most critical tools in therapy to understanding an individual's life story (Barrett, 1980). More specifically, he hypothesized that one's personal characteristics seep through when describing their early memories (EM's). EM's are representative of desires, facts, fantasies, and parts of one's present state of mind (Mayman, 1968). How one recalls a memory is a narrative account of their internal processes (Karliner, Westrich, Shedler, & Mayman, 1996). Thus, it is important to understand early memories as a process that involves insight into one's construction of their experiences. Further, there is an element of repression connected to early memory recollections (Fowler, Hilsenroth, & Handler, 1995).

Mayman understood early memories as pieces of information reflective of one's earliest relationships that help shape their identity, specifically in the process of

consolidation (Mayman & Faris, 1960). EM's serve as a basis for understanding intrapsychic processes connected to one's psychological state and personality functioning (Brewer, 1986). How one interprets their experiences can have more influence internally than the actual external experience (Barrett, 1980). Mayman reconstructed Adler's theory in order to apply early memories to object relations paradigms and study how they influence interpersonal connections (Fowler et al., 1995). He agreed with Adler's belief that early memories are unconsciously formed to representations of self and others (Fowler et al., 1995). Moving from a theoretical to a research perspective emphasizes the clinical utility that early memories have.

Plewa (1935) studied many patients who he found to have typical early recollection characteristics. For instance, he found commonalities of memories for the following categories: psychosomatic disorders where early memories were concerned with illness, masochistic character disorders where memories were represented by punishments, anxiety that included recollections of being scared, memories associated with hysteria, obsessive-compulsive neurosis, and fears of being abandoned as represented by depressive symptoms (Plewa, 1935). Friedman and Schiffman (1962) looked at four of Plewa's categories with schizophrenics. They hypothesized that early recollections of schizophrenic patients would indicate absence of positive affects, unexplained fear, concern with bodily harm which is not explained by an illness and absence of personal connections. Similarly, they looked at depressive patients who they hypothesized would show positive affect, negative affect, preoccupation with physical illness, desires to be close to others, and achievement (Barrett, 1980; Friedman & Schiffman, 1962). They found the categories to be

statistically significant. An important consideration is that for each group there is an emphasis on physical symptoms. There is much evidence detailing the impact that early childhood memories have in helping explain one's physiological, psychological and social aspects of functioning (Schore, 1994).

Dolan and Fowler (2011) looked at inpatients' early childhood memories and dependent behavior. They studied the EM perspective to test whether one's mental representations of self and others is stable or not. They found that a memory consistent with dependent themes in their narratives were more involved in social groups and sought interactions with nurses and doctors. Patients who expressed counterdependent themes were more abrasive and hostile with staff members, were more likely to be impulsive, and experienced greater emergency room visits (Dolan & Fowler, 2011). This study concludes the clinical utility that early memories have in understanding and developing greater insight into object representations of self and others.

Early Memories as a Free Response Measure

Early memories have been increasingly researched as a clinically useful projective or free response measure (Bruhn, 1985). Acklin, Sauer, Alexander and Dugoni (1989) assessed how EM's could be used to successfully differentiate between depressed and nondepressed individuals. It was hypothesized that the presence of viewing self as passive and ineffectual, damaged, harmed and/or frightened and others as need frustraters in the earliest childhood memories of adults would display affective disruption in depressed individuals (Acklin et al., 1989). Undergraduate participants completed the Beck Depression Inventory, the Profile of Mood States, and an EM

questionnaire. They found significant results, $p < .001$, differentiating depressed and nondepressed individuals (Acklin et al., 1989).

Acklin, Bibb, Boyer and Jain (1991) studied early memories as expressions of relationship paradigms. They predicted that early memories would display convergent validity with measures of attachment style, mood and clinical symptomatology. They found that relationship paradigms could be reliably coded from EMs (Acklin et al., 1991). Additional studies looked at early memories as similar to dreams in a therapeutic setting because they allow the patient to communicate their fantasies and defenses (Binder & Smokler, 1980). Early memories have also been identified as similar to the cognitive-perceptual method with a focus on unresolved issues in one's narratives (Bruhn, 1992). These studies describe the importance of developing a scoring system for the understanding of early memory recollections (Last & Bruhn, 1983).

Mayman designed the early memories scale in order to assess one's individual differences in their enduring themes of self and expectations of others (Acklin et al., 1991). This reflects one's depth, warmth, flexibility, and complexity of their inner object world (Karliner et al., 1996). Martin Mayman designed the early memories test (EMT) which can be used to identify and examine object representations. Specifically, this measure assesses how one describes others in detailed, complex, discerning, and beneficent ways reflecting their overall psychological health (Westen, 1991). Thus, the idea is designed around studying the self implicitly. The procedure involves asking patients to remember early childhood memories of themselves and important figures in their life. The EMT may be administered verbally or in writing

and has been used extensively in both forms. A short form of the EMT (EMT-S) is used to ask respondents about five early childhood memories. For each memory, follow-up questions ask for the participants' thoughts of himself or herself in the memory, the mood or feeling tone associated with the memory and how old the individual was during the time of the memory (Karliner et al., 1996).

Object Relations and Attachment Style: A Comparison

While attachment and object relations have been presented in separate sections, it has become imperative in the literature to detail the similarities between them. More recently, there has been much literature in the comparison of these two constructs (Blatt & Levy, 1998; Steele & Steele, 1998; Stein, Siefert, Stewart, & Hilsenroth, 2011). It can be agreed on that in both theories, early relationships with important caretakers are critical and influence how one will think about themselves and their relationships with others (Stein et al., 2011). Sensitive caregiving is needed in order for the child to experience a basis of being (Winnicott, 1962). This is a related concept between attachment theory and psychoanalysis for the purpose that an attachment figure be "good enough" (Winnicott, 1962). This also lays the foundation for later relationships that are not perfect, but demonstrate "good enough" care.

Further, if one obtains a secure attachment style then they will likely have room for a greater degree of cognitive functioning. Affect regulation is also a point of comparison, as if one can manage and balance their affective states, then they can open up a greater degree of cognitive resources (Bretherton, Bates, Benigni, Camaioni, & Volterra 1979; Main, 1991). Further, whether through internal working models or mental representations; there is some degree of internalization that takes

place as explained by both theories. These representations guide how one thinks, feels, behaves and seeks out certain others in their life (Stein et al., 2011).

In the research domain, there are studies which have looked at the relationships between attachment theory and object relations (Calabrese, Farber, & Westen, 2005; Cassidy, 1998; Levy, Blatt &Shaver, 1998; Steele & Steele, 1998; Stein et al., 2011). Specifically, Calabrese et al. (2005) hypothesized that the object relational dimensions, complexity of representations and capacity for emotional investment in relationships, on the SCORS (Social Cognition and Object Relations Scale) would be associated with dimensions of attachment related to security. The results indicated that several dimensions of the SCORS correlated with dimensions of attachment, as measured by the Reciprocal Attachment Questionnaire (West, Sheldon, & Reiffer, 1987). Individuals who presented with complex representations of self and others and were able to invest in others emotionally and show empathy were more secure in their attachment and able to seek support from others when distressed (Calabrese et al., 2005).

Stein and colleagues (2011) assessed whether higher levels of attachment security would be associated with more adaptive ratings on the dimensions of the SCORS. They used two self-report attachment measures and found that the self-esteem, emotional-investments in relationships, and affective quality of representations variables were associated with higher secure attachment scores (Stein et al. 2011). Further, Levy et al., (1998) assessed attachment patterns (secure vs. insecure) and found differences in the quality of parental representations in four attachment groups.

Object Relations and Attachment Style: Points of Divergence

A very important point of divergence for attachment theory and psychoanalysis originates from the biological structure of each approach. One important goal in attachment is to maintain proximity to the mother to regulate a physical state of balance. The caregiver's response determines the activation or deactivation of the attachment behavioral system. This contrasts with Object Relations theorists' formulation that the child is seeking an object and the relationship itself between caregiver and infant is of great importance (Fonagy, 2001).

The commonality of maternal sensitivity and mirroring in attachment theory and psychoanalysis is very important to both perspectives. However, how maternal sensitivity overall is understood in these theories is very different (Fonagy, 2001). Attachment theory defines sensitivity from the point of view of the attachment figure. For instance, the focus is on constructs such as the caregiver's personality traits, responses to the child and the mental representation of the child in the caregivers mind (Fonagy, 2001). In psychoanalytic theory, the result of maternal sensitivity or insensitivity for the infant is of focus. Thus, how does this interaction affect the child's later development and maturity (Fonagy, 2001)?

The psychoanalytic school believes that attachment theory should devote more to patterns of distortions from the child's perspective of the external world (Fonagy, 2001). Those who take the psychoanalytic stance criticize attachment theory's specific focus on concrete and actual experience, rather than taking into account that a caregiver can provide the same care with different infant attachment results (Fonagy, 2001). As such, in attachment theory, there is a missing component regarding the

infant as unique based on their own internal states, fantasies, affects, and conflicts (Fonagy, 2001).

Secondly, Internal Working Models are often described as one biological mechanism, however it is likely that they are multidimensional and exist in conflict (Fonagy, 2001). Further, they may form with one's development and it has been argued that the explanation of maturational development is limited in attachment theory. Fonagy (2001) states that there is a likely evolving developmental level that increases one's interpersonal awareness. Further, there has been much criticism in mental health, specifically in diagnosis and psychopathology, for placing one's level of functioning into a distinct category. To place one's attachment style into distinct categories that imply one or the other (i.e., secure or avoidant) can lead one to misinterpret the complexity of internal processes.

Object relations theory has been understood as having a more epigenetic and developmental approach (Levy et al.,1998). This perspective postulates that representations of self and others are constructed over one's development and are increasingly complex and solidified. Levy et al., (1998) stated that "According to this approach, higher levels of representations evolve from and extend lower levels; thus, new representational modes are increasingly more comprehensive and effective than earlier modes of representation" p.542.

Further, representations of self and other vacillate from being concentrated to one area of functioning and global to being highly flexible and hierarchically organized (Levy et al., 1998).

Somatization

It has been established that early experiences with caregivers, internal working models, and mental representations of self and others impact how one understands and communicates their mental, emotional, and physical symptoms. When in distress, how one responds determines the degree to which these symptoms are problematic. In primary care, people with somatic symptoms are often difficult to treat (Fink & Rosendal, 2008). The goal is for people with such symptoms to receive the same quality of care as any other patient (Fink & Rosendal, 2008).

Research conducted in the general population and in healthcare settings have shown that at least one third to one half of patient symptoms cannot be explained medically (Kroenke, 2003). Further, medically unexplained somatic symptoms and seeking behavior from health care providers occurs in 10-15% of patients in primary care (Kroenke, Spitzer &Williams, 2001). People with somatic symptoms are typically seen in general medical settings rather than psychiatric settings. Additionally, there has been further acknowledgement that one can somatize even when a medical condition is present, given that his or her symptoms are exaggerated (American Psychiatric Association, 2013).

There are diverging thoughts in the literature on how to define somatization. Currently, with the newly published DSM-5 (American Psychiatric Association, 2013), the term "somatization" has been removed and placed under the umbrella of somatic symptoms disorder. This will be explained further in the next section. Nevertheless, the conceptual framework has yielded two prominent perspectives regarding somatic symptoms. One perspective states that somatization is a process

where an individual experiences and reports physical symptoms that cannot be explained fully or at all by a medical condition (Kroenke & Rosmalen, 2006). The competing definition states that psychological factors must be found and determined as the cause of physical symptoms in addition to the absence of a medical condition (Kroenke & Rosmalen, 2006). However, the latter definition can be difficult to confirm and explain.

Somatization as Diagnosis

Both of the somatization definitions for the DSM-IV-TR (American Psychiatric Association, 2000) and the DSM-5 (American Psychiatric Association, 2013) will be described. In the DSM-IV-TR (American Psychiatric Association, 2000), Somatization is placed under somatoform disorders and characterizes them as physical symptoms that are present and cannot be explained. Further, Somatization or somatic symptoms, have been present for over 10 years and are typically comprised of pain, gastrointestinal difficulties, sexual complaints and pseudoneuropsychological symptoms. The main feature of somatization disorder is:

A pattern of recurring, multiple, clinically significant somatic complaints. A somatic complaint is considered to be clinically significant if it results in medical treatment (e.g., taking of medication) or causes significant impairment in social, occupational or other important areas of functioning (American Psychiatric Association, 2000, pp. 490).

Many people with this disorder describe their complaints in an exaggerated way, but factual information is often missing or seems incomplete (Stuart & Noyes, 1999). Common symptoms are often vague and can fall under the description of nausea

and/or abdominal bloating, general pain, sexual, and pseudo-neurological symptoms (American Psychiatric Association, 2000; Stuart & Noyes, 1999). There are three distinctive features that may reflect a diagnosis of somatization disorder. First, there appears to be an involvement of multiple organ systems. Second, early onset is experienced and a long standing history of complaints without a development of physical signs is often recognized. Third, there is an absence of laboratory abnormalities. In a health care setting, the term somatization implies the association between medically unexplained symptoms that cause significant distress and thus lead to support-seeking from medical professionals (Kroenke, Spitzer, & Williams, 2001).

As stated, The DSM-5 (American Psychiatric Association, 2013) defines such symptoms under the category of Somatic Symptom Disorder (SSD) with the understanding that somatic symptoms result in significant disruption of functioning with excessive thoughts, feelings, or behaviors that are present. Another change to the diagnosis does not require that somatic symptoms are medically unexplained, but that they may exist in the presence of a medical condition and that these symptoms and complaints are excessive or disproportionate (American Psychiatric Association, 2013).

In general, what can be understood about somatizing behavior is that bodily symptoms are the primary focus in understanding one's responses to distress in most situations. This may reflect a limitation in cognitive processing and regulation of one's emotions (McDougall, 1985). Individuals who somatize are less likely to access processes which allow them to free associate fluidly and they often reflect an absence of self and psychic representation (McDougall, 1985). There may be missing

information in the way that a patient verbalizes their understanding of their own distress and symptoms. It has been reported by some theorists, that the intensity of somatic phenomena typically increases when the individual feels abandoned or experiences a sense of perceived loss (McDougall, 1985). Perceived loss is a subjective phenomena that carries residue of the individual's own psychic processes surrounding abandonment.

History of Somatization and Current Understanding in the Literature

McDougall (1989) studied the unconscious significance of psychosomatic manifestations in order to extend the link between failures of internalization and somatic discharge. When a mother fails to protect her infant from traumatic experiences, the infant may lack the ability to distinguish between self and other representations (Fonagy et al., 2002). McDougall (1989) states that this may lead to an archaic body representation. The infant experiences confusion about the limits of their body and the distinction between their own body and their mother's. Those who somatize attribute their distress to external circumstances, since their internal mental states have not matured or provided a safety net for regulating stimuli (McDougall, 1989). Freud (1920) described this process as the origins of projection that are likely to predict pathological responses. He further described the ego as originating in the body, then describing it through mental states (Freud, 1923). This *body-ego* stems from the idea that the mind expresses itself first through bodily states (Freud, 1923). Additionally, Freud (1911) defined the term Bindung, or linking as representative of the change from physical to a psychological quality of linking.

Earlier observations of somatization can find its roots in Freud's work with hysterics. He made formulations regarding the role of repression in hysteria and its bodily representation (Gerson, 2011). While he attributed this repression to sexuality and conflicted libidinal wishes developing in childhood (Gerson, 2011), he discussed conversion hysteria, obsessional neurosis, and actual neurosis as possible ways one may transfer their emotions (Freud, 1915). McDougall (1989) presented a fourth possibility of one experiencing somatic symptoms: that they never actually develop an understanding of affect. Thus, affect may function at such a level that it dismisses verbal recognition and cannot be described in words. That, if one's mental functioning is deprived of such processes, then the chain of meaningful psychic representations is lost (McDougall, 1989). If this is a chronic form of dealing with distress, then it can be said that there is a predominant regression to infantile ways of psychic functioning accompanied by somatic manifestations (McDougall, 1989).

In the literature, there are different perspectives that may help explain the potential development of somatizing behavior. First, children who experience adverse interactions with their caregivers, endure trauma (i.e., physical abuse, sexual abuse, loss of a parent) or have a caregiver who suffers from chronic illness, may be more at risk for somatizing behavior (Stuart & Noyes, 1999). The second perspective proposes that somatizing behavior can be a result of inadequate communication in handling stress responses to internal and external stimuli (Stuart & Noyes, 1999). For instance, a caregiver who does not mirror stress reduction adequately will likely challenge the infant to develop alternative strategies to handling their stress. Thus, being ill may be one way of eliciting a caring response from another, but it does not

reflect a focus on the actual distress which is trying to be communicated (Stuart & Noyes, 1999).

Somatization and Relatedness

As stated, somatization has been understood as deriving from disruptions in early life and lapses in empathic relations with caregivers (Blaustein & Tuber, 1998). Specifically, theorists and researchers have noted that one's affectivity and object relations are compromised for such reasons (Blaustein & Tuber, 1998). It has been noted that those who somatize likely have impaired capacities for affectivity, symbolization, and construction of fantasy, specifically in a therapeutic setting. Globally, somatization can be understood as an individual's difficulty in expressing and regulating strong affects that ultimately interfere with their relationships (Fonagy et al., 2002).

Further, there can be an inconsistent boundary misunderstanding between self and other (Taylor, 1987). Thus, from an attachment perspective, one's early relationships are crucial to the development of their emotional understanding and flexibility. This includes, as has been stated, the affective component which is critical in understanding the self and other models of attachment and object relations theories. Specifically, affectivity has been linked continually to relatedness and is defined as giving shape to our understanding of interpersonal interactions and expression of emotions (Blaustein & Tuber, 1998). As such, lacking affective understanding leads to serious challenges in relatedness and may set up a course for somatic symptoms (Blaustein & Tuber, 1998).

Many researchers have looked at how cognition is connected to affective experience in relation to self and other. Ekman (1992) described five basic emotions; happiness, sadness, anger, fear, and disgust. From this perspective, it is understood that emotions "happen to us" due to their rapid onset which leaves us feeling as though we do not have a choice in our emotional responses (Fonagy et al., 2002). One criticism of this perspective is that affects may be better understood as degrees of severity, arousal, activity and pleasure rather than categories (Fonagy et al., 2002). Alternatively, the James-Lange theory postulates that affects are the reaction to our own physiological and bodily states (Fonagy et al., 2002). This is especially important in understanding somatic reactions to psychological distress. More specifically, in the paradigm of affect regulation, if cognition indicates that one is aware of affect then this may be useful in understanding the affective experience as related to the body.

McDougall (1989) states:

> "All of us use action instead of reflection when our usual defenses against mental pain are overthrown. Instead of becoming aware that we are guilty, anxious, or angry, we might overeat, overdrink, have a car accident or a quarrel with our neighbor...." (p.15).

McDougall continues by explaining that one who "overuses" such defenses disperses their emotions as to get rid of them quickly, putting them into action, rather than experiencing thoughtful reflection of feeling states (McDougall, 1989). The idea of discharge and immediate release appears to have connections to what is tolerable

in the moment for the individual with a lack of insight that feelings may be underlying such action.

Blaustein and Tuber (1998) interviewed participants who experienced elevated somatization levels over a span of 20 weeks and additionally included two clinically designed instruments. They provided a case example which followed the course of somatic distress for a participant and they reported that greater somatic symptoms were connected to one's inability to recognize interpersonal discord and one's reactions to such conflicts (Blaustein & Tuber, 1998).

Physical Health, Utilization, Attachment, Object Relations and Somatizing Behavior

Maunder and Hunter (2009) found that the four attachment styles (secure, preoccupied, dismissing and fearful) were connected to doctor-patient relationships and health outcomes. They concluded that patterns of adult attachment affect physical health and that knowledge of these patterns can guide physicians in understanding individual differences of interpersonal styles that affect their overall physical health (Maunder & Hunter, 2009).

It has been reported that somatization is very high among primary care patients who make frequent doctor's visits. They have percentages between 16 and 45% (Karlsson, Joukamaa & Lahti, 1997) pertaining to frequency. Ciechanowski and colleagues (2002) were looking to understand symptom perception and health care seeking behavior. They hypothesized that attachment is a useful model in understanding the interaction between these two constructs. They proposed that individuals with a negative self model, preoccupied and fearful attachment, are likely to report higher somatic symptoms to their health care provider (Ciechanowski et al.,

2002). This rests on the notion that one who has an anxious attachment is likely to seek care excessively and request attempts to gain support in understanding their symptoms.

Research on avoidant attachment styles (e.g., dismissive) has been mixed regarding reports of somatic symptoms (Tacon, Caldera, & Bell, 2001), however, characteristically, dismissive individuals are less likely to seek support from others and in turn less likely to *report* physical symptoms (Ciechanowski et al., 2002). Many studies use self-report measures and according to some researchers those with avoidant attachment typically do not report vulnerabilities or seek help in general, thus they may state that they are experiencing minimal physical distress (Mikulincer & Shaver, 2007). However, some researchers and theorists have demonstrated that anxiously preoccupied individuals show more psychological distress, where avoidantly attached people experience a higher degree of somatic symptoms (Eagle, 1999). What has been determined about avoidant individuals is their lack of compliance to medical recommendations and regimens (Mikulincer & Shaver, 2007). Due to poorer communication among these individuals, they are less likely to follow instructions. Specifically, many researchers have found that avoidant patients' typically demonstrate poor self-care which leads to persistent and severe chronic illness (Ciechanowski et al., 2004 as reported in Mikulincer & Shaver, 2007; Cohen et al., 2005; Fonagy, 2001; Turan et al., 2003).

Stuart and Noyes (1999) further describe that the adverse early childhood experiences for individuals who somatize are connected to their self-development and attachment styles. They suggest that a pattern of insecure attachment manifests in

such scenarios and affects personality development and later interpersonal relationships. Specifically, when one is anxiously attached they believe that care seeking behaviors inevitably affect the stability of one's relationship (Stuart & Noyes, 1999). More recently, researchers have detailed the high prevalence of somatization disorders in mental health and the existing challenge in understanding their etiology. Thus, compiling a list of findings on alexithymia, attachment, and trauma have helped formulate hypotheses regarding somatic symptoms (Landa, Bossis, Boylan, & Wong, 2012).

Landa et al. (2012) studied patients diagnosed with somatization disorder who completed an interview on relationship themes and measures on interpersonal relatedness, alexithymia, and trauma. The results indicated that the unmet need for closeness with others was the primary internal representation of relationships in 90% of the patients (Landa et al., 2012). It is thus understood from current researchers' perspectives that attachment style works in conjunction with interpersonal behavior. This is a point of contact for the two models described thus far, attachment and object relations. Gallo, Smith and Ruiz (2003) suggested that adult attachment as explained through the dimensional system is not clear, and highlighted the association to conceptually related interpersonal constructs. They described the interpersonal model (Kiesler, 1996). It is important to note that while each model has typically been used separately to predict somatizing behavior, attachment more so, they may work better together and through different methods to explain such presentations (i.e., measuring internal representations through narrative accounts). It is important to wonder if these

models together can lead to further understanding and more effective care with these patients.

Scicchitano, Lovell, Pearce, Marley and Pilowsky (1996), discussed the difficulty in detecting psychological problems early for patients' in the primary care setting who's predominant mechanism of handling stress is through physical complaints. They discussed the propensity for somatizers to deny that stressful situations exist or deny their responsibility for them. Patients with predominantly somatic complaints (without an organic cause) may use such complaints as a way to deal with or avoid emotional conflicts. The findings indicated that male somatizers acknowledged the existence of personal difficulties, but did not often associate their physical symptoms with the psychological distress connected to them (Scicchitano et al., 1996).

Somatization is not just present in a medical setting with healthcare providers, but pervasive throughout one's daily lifestyle**.** Hazan and Shaver (1990) designed a study surrounding love and work as key determinants in adulthood. They drew comparisons between how love and work in adulthood can be drawn from attachment and exploration in early childhood. Regarding physical health, they reported that individuals with a secure attachment style are likely to have better overall well-being (Hazan & Shaver, 1990). This is especially represented by a decrease in psychological and physical distress (i.e., less likely to experience anxiety and sickness) (Hazan & Shaver, 1990). Additionally, they found that avoidant individuals were more likely to report that work interferes with their health (Hazan & Shaver, 1990). This finding contrasts with what researchers typically discover regarding self-reports of distress for avoidant people (Mikulincer & Shaver, 2007). Feeney and Ryan

(1994) found that anxious/ambivalent individuals had more physical symptoms than both secure and avoidant individuals. People with an avoidant style may feel better able to report distress when it is connected to another construct (i.e., work), rather than reporting their physical symptoms directly. It is likely that displacing their distress takes the focus off of their emotional struggles.

Actual separation from an attachment figure can lead to internal distress resulting in sickness and pain (Bowlby,1969/1982; Mikulincer & Shaver, 2007). As one matures, there is a responsibility that involves taking care of one's physical health and concerns through precautionary measures as well as proper steps to reducing discomfort during sickness (i.e., setting up appropriate Doctor's appointments) (Mikulincer & Shaver, 2007). Mikulincer & Florian (1998) reported a study that was conducted regarding the impact of attachment style on coping with chronic lower back pain. It was discovered that avoidant and anxious-ambivalent men suffering from chronic low back pain, compared to healthy men, were more likely to experience higher levels of psychological distress than the control group. Secure individuals in the pain group were able to find healthy strategies to cope with their physical pain (Mikulincer & Florian, 1998).

General physical illness has the potential to elicit attachment type concerns. Specifically, one who has an insecure attachment style or poor interpersonal relations is likely to respond in a disorganized or ineffective manner to physical concerns. How one perceives their physical health and illness as well as how they generally take care of themselves has roots in attachment and object relational related phenomena. It is thus important to provide further details regarding how one's utilization of healthcare

services may reflect their attachment *and* object relational models. There is a subset of research which has focused on attachment style and a healthcare population. As stated, people with secure attachment are likely to seek support in times of distress (Waller, Sheidt, & Hartmann, 2004). Conversely, insecurely attached individuals assume that they will not have their needs met and thus do not expect much in seeking care from others. It has been noted that a preoccupied attachment style is connected to higher primary care utilization and costs (Ciechanowski et al., 2002), and the nature of symptom reporting regarding attachment style is less clear (Waller et al., 2004). Waller et al., (2004) reported that insecure attachment was associated with a higher degree of health care utilization.

Applying these principals in primary care are vehicles to understanding illness behavior. The relationship between a primary care provider and their patients may serve as an attachment relationship, where the patient is searching for a secure other that encompasses security in times of distress and illness (Maunder & Hunter, 2009). Maunder & Hunter (2001) stated that in understanding the nature of attachment patterns, we are shaping intervention and clinical thinking in a setting that demands increased psychological intervention.

Chapter II: Methods

The present study assesses hypotheses related to attachment style, object relations, somatic symptoms, healthcare utilization and overall physical health. There is some theoretical and anecdotal grounding to date on mental representations and interpersonal relatedness, but little research has been established connecting object relations and somatization. There is research connecting models of attachment and

somatization. However, it is necessary in both domains to apply a more systematic and empirical investigation. Upon review of the literature, there appears to be no current research connecting object relations and attachment in primary care (e.g., somatization, physical health and utilization). Thus, the following study has been formulated to assess possible connections between related models (Attachment and Object Relations) and apply them to individuals in primary care.

Participants

Participants include a total of 102 adult primary care men and women who were recruited for the study. Inclusion criteria are adults (men and women) between the ages of 18 and 65 who are patients of the Family Medicine Center clinic. Exclusion criteria include people who are younger than 18 years of age, people accompanied by a legal guardian, and people who cannot read or write in English.

Procedure

Family Medicine Center clinic patients were handed an information sheet describing the study as they entered the waiting room. The information sheet includes that the study involves research, the topic of the research, the time commitment involved, a description of the surveys and early memories test and that their participation is completely voluntary (Appendix J). Further, the assigned physician was given an information sheet that included the same information (Appendix K). After being handed the information sheet, a researcher told them to verbally let them know if they were interested in participating. If they were interested in participating, they were given demographic and self-report measures to complete in the clinic waiting room. When they were brought back to the exam room for their medical

appointment, the researcher accompanied them because patients often wait an additional 10 minutes prior to seeing the doctor. Once all of the self-report items were completed, the researcher asked participants to provide 4 early memories (according to the Early Memory protocol) (Mayman, 1968; Fowler et al., 1996). Research participants were given a $10 gift card for their time. This required a total of $1,020 to pay 102 participants.

Hypotheses

The hypotheses have been constructed to assess attachment and object relations in healthcare. Specifically, the hypotheses predict that attachment and object relations will provide meaningful contributions to health outcomes. This appears to be the first study that incorporates attachment and object relations as models to predict somatic symptoms, healthcare utilization, and physical health in primary care. Provided previous research with SCORS variables, there is an expectation that the present study will reveal two factors within the object relations paradigm (cognitive and affective). Further, attachment style and object relations are expected to influence how one experiences and communicates their own health and utilization of services. As such, the following hypotheses support the possible theoretical underpinnings associated with health:

H1: A factor analysis of the SCORS-G will reveal separate cognitive and affective factors.

H2: The model of attachment will predict somatic symptoms, healthcare utilization, and physical health in a primary care sample of men and women.

H3: The model of interpersonal relatedness will predict somatic symptoms, healthcare utilization, and physical health in a primary care sample of men and women.

H4: A model of Attachment and a model of Object Relations together better predict the degree of somatization, physical health and healthcare utilization experienced among participants than either model alone.

Variables

Participants completed demographic items: age, race, gender, education, marital status, income, job. They were asked to recall their clinic visits, ER visits, and hospitalizations within the past year in order to measure healthcare utilization. Further, they completed Somatization scales (22 questions), Attachment Scales (17 questions) and Early Memories (e.g., earliest, mother, father, high point).

Measures/Instruments

Experiences in Close Relationships Scale-Short Form (Brennan, Clark, & Shaver, 1998; Fraley, Waller & Brennan, 2000; Wei, Russell, Mallinckrodt, & Vogel, 2007)

A short form of the Experiences in Close Relationships Scale (ECR-Short Form) was used for the present study (Appendix A). The original Experiences in Close Relationship Scale is 36-item self-report measure. Participants use a 7-point Likert-type scale ranging from 1 (strongly disagree) to 7 (strongly agree) when responding to the items. “4” is the neutral item on the scale. Of the 36 items, 9 are reverse keyed from the Avoidance and Anxiety subscales. Attachment anxiety is defined as involving fear of rejection and abandonment from others. Avoidance is defined as fear of depending on others and a need to be self-reliant in most situations. Participants are asked to rate how well each statement describes them in relationships

with others. 18 items measure Anxiety and 18 items measure Avoidance. Higher scores on the Anxiety subscale indicate high anxiety and higher scores on the Avoidance subscale reflect higher avoidance. Low scores on both dimensions demonstrate a secure attachment style. The ECR has been used in many studies and demonstrates high reliability with coefficient alphas reaching .90 and test-retest coefficients (depending on the time span) existing between .50-.75 (Mikulincer & Shaver, 2007). Further, validity has been supported by many studies (Mikulincer & Shaver, 2007). A 12-item short form was developed (Wei et al., 2007) in order to address the problematic applications of a lengthy measure. The short form is similar to the original ECR, but includes 12 of the most valid and reliable items measuring anxiety and avoidance. Wei et al., (2007) found that in a sample of college students, the ECR- short form had coefficient alphas from .77 to .86 for the Anxiety subscale and .78 to .88 for the Avoidance subscale across six studies. Findings reveal that N= 122 undergraduate students are M=21.73 for the Anxiety dimension and M=16.28 for the Avoidance dimension (Wei et al., 2007).

Relationship Questionnaire (Bartholomew & Horowitz, 1991)

The RQ is a self-report measure that asks participants to read four paragraphs which explain one of four attachment styles (Appendix B). The RQ defines in detail the four types of attachment styles (i.e., secure, preoccupied, fearful, dismissing). Participants are asked to circle which style best describes them. Further, they are asked to rate on a seven point likert scale the degree to which each style describes them. (i.e., "1" is not at all like me, "4" is neutral, and "7" is very much like me). It is comprised of four paragraphs which describe the four attachment styles. The RQ asks

participants to choose which description they are most like and choose how well they fit in each category which represents continuous and categorical variables. It has been reported that the RQ's test-retest reliabilities at various times are around .50 (Mikulincer & Shaver, 2007).

Brief Symptom Inventory-7 Somatization Scale (Derogatis & Melisaratos, 1983; Derogatis, 2001; Derogatis, 1993)

The Brief-Symptom Inventory (BSI) is a self-report inventory that involves 53-items where participants rate how frequently and to what degree they have been experiencing a symptom within the last week. Specifically, of the nine subscales, the BSI- 7 Somatization scale (Appendix C) was used in order to rate degree of somatic symptoms experienced within the past week. Participants rate the extent to which they have been bothered by such symptoms in the past week (0= "not at all" to 4 "extremely"). The BSI-18 which includes depression and anxiety in addition to somatization has reliability indexes from .74-.84 (Derogatis, 2001). Normative data for the general population of people between the ages of 14-92 (N=5,031) is M= 3.8 (Kocalevent, Hinz, & Brahler, 2013).

Early Memory Narratives as rated by the Social Cognition and Object Relations Scale- G (SCORS-G) (Stein, Hilsenroth, Slavin-Mulford, & Pinsker, 2011; Westen, 1995)

Early childhood memory narratives consist in this study of four narratives (Earliest, Mother, Father, High Point) (Appendix E). First, the participant is asked to think back as far as they can remember and recall their very earliest memory (Fowler et al., 1998; Karliner et al., 1996). Subsequently, the other three memories will be asked in the same way. The Social Cognition and Object Relations scale is a measure

that can be applied to early memory narratives in order to assess object representations.

The SCORS-G is derived from the origins of the Social Cognition and Object Relations Scale (SCORS) measure (Westen, Barends, Leigh, Mendel & Silbert, 1990; Westen, Silk, Lohr, & Kerber, 1985). It consists of eight dimensions that are scored on a seven-point scale in which lower scores determine more pathological responses and higher scores are representative of healthier responses (Appendix F). The eight variables are Complexity of Representations of People, Affective Quality of Representations, Capacity for Emotional Investment in Relationships, Emotional Investment in Values and Moral Standards, Understanding of Social Causality, Experience and Management of Aggressive Impulses, Self-Esteem, and Identity and Coherence of Self. Complexity of representations of people measures how well one understands their own internal states as well as others when discussing narratives. Affective quality of representations assesses one's expectations from others in a relationship and their own experiences in relationships as well. This dimension is also representative of how one has experienced past relationships. Capacity for emotional investment in relationships focuses on the depth and investment (or lack of) experienced in relationships with others. Emotional investment in values and moral standards measures how an individual can demonstrate caring and moral representation beyond literal meaning. Understanding of social causality assesses how well an individual has the capacity and depth to understand why people do what they do. Experience and management of aggressive impulses assesses how well one can manage and tolerate their aggression. Self-esteem assesses the patient's

understanding of self. Identity and coherence of self measures one's level of fragmentation and integration. The SCORS-G was used to rate narratives of four early childhood memories (i.e., Earliest memory, Earliest memory of Mother, Earliest memory of Father, and a memory of a high point).

Stein et al., (2011) assessed inter-rater reliability for the SCORS-G ratings by calculating intraclass correlation coefficients (ICCs) for relational episodes. They demonstrated excellent reliability (Shrout & Fleiss, 1979) for affectivity (0.83) and self-esteem (0.82), good reliability on aggressive impulses (0.67) and fair reliability on social causality (0.57), emotional investment in relationships (0.55) and complexity of representations of people (0.54). Because they found poor reliability for emotional investment in values and moral standards and identity and coherence of self, these dimensions were not used in the study (Stein et al., 2011).

Patient Health Questionnaire (PHQ-15 Somatization Scale) (Kroenke, Spitzer, & Williams, 2002)

The PHQ-15 is a brief, continuous, self-report questionnaire that is helpful in assessing and monitoring somatic symptom severity and somatization in a variety of settings (Appendix G). The PHQ-15 has 15 somatic symptoms from the original PHQ which is a self-report version of the PRIME-MD diagnostic instrument. Each symptom on the PHQ-15 is scored from 0 ("not bothered at all") to 2 ("bothered a lot"). It is important to note that the PHQ-15 specifies the most prevalent somatic symptom clusters represented in outpatient settings. Kroenke et al., 2002 used chronbachs alpha to assess internal reliability and achieved an excellent reliability score of .80 in a primary care setting. Construct validity of the PHQ-15 was measured

by using six SF-20 scales, disability days, symptom related difficulty, and healthcare utilization. The study showed the association between PHQ-15 severity and three measures of construct validity (self reported disability days, clinic visits and how patients attribute difficulty to their symptoms). Similarly, there was established convergent validity by the strong association between PHQ-15 scores and functional status, disability days, and difficulty with symptoms (Kroenke et al., 2002). Fink and Rosendal (2008) state that questionnaires using the number of somatic symptoms to classify people as somatizers in epidemiological studies is appropriate for primary care. Most medical conditions are well-defined and do not present with multiple symptoms in many different areas (Fink & Rosendal, 2008).

Additionally, there will be one question on Overall Health (SF-20; Stewart et al., 1988) and Doctors rating of patient's overall physical health (Visual Analog Scale). (Appendix H and Appendix I) Further, there will be three Healthcare Utilization questions that will address clinic visits, emergency room visits, and hospitalizations in the past year (Multidimensional Health Profile; Karoly et al., 2005). (Appendix D)

Data Analysis

Descriptive statistics including means and standard deviations are described and summarized on the data collected for the participants involved. The first hypothesis states that a factor analysis of the SCORS-G will reveal separate cognitive and affective factors. The proposed data analysis, as followed by the model presented above, is conducting a factor analysis which will determine the shared variance which exists among a set of variables (Mertler & Vannatta, 2010). The eight dimensions of the SCORS-G variables have been reduced to determine which variables cluster

together, in this case, loading on cognitive and affective factors. The second hypothesis looks at the attachment variables within each attachment measure and their prediction of somatic symptoms, healthcare utilization, and physical health. A stepwise linear regression was used to determine the relationship and prediction (Mertler & Vannatta, 2010).

The third hypothesis states that Object Relations, as measured through early memory narratives, will predict degree of somatization, physical health, and healthcare utilization. The statistical analysis for this hypothesis was a stepwise linear regression using the two factors obtained from the factor analysis in order to predict the dependent variables. The fourth hypothesis assessed the degree to which attachment and object relations together predict somatization, healthcare utilization, and physical health better than either model alone. All attachment variables (anxiety, avoidance, secure, fearful, preoccupied and dismissing) were used and the two object relations factors (cognitive and affective) in a stepwise linear regression. The purpose is to see if they have complementary factors that differentiate various levels of interpersonal and personality functioning. Additionally, this analysis will asses if previous findings (Stein et al., 2011) of attachment and SCORS-G variables are significant in the present study. Stein et al. (2011) discovered variables of the SCORS-G (e.g., Identity and Values and Moral Standards) that did not reach adequate inter-rater reliability, thus they were removed from the analysis. A similar process will be considered for the present study.

Chapter III: Results

Demographic information (Table 1) reveals that 102 people participated in the study. The mean age was 41.8. Sixty-four participants were Caucasian, 28 were African American, and 8 fell into the other category. Most participants had some college (41%) or a college degree (30%). 55 people were married, 26 were single, and 20 were divorced/separated/widowed. Forty-eight participants earned $40,000 or less, 27 earned between $40,000-$80,000, and 26 earned greater than $80,000. Forty-nine people were working full-time, 18 were working part-time and 35 were either unemployed or working under other circumstances.

Table 1

Demographic Information (N=102)

Variable	N	%
Gender		
Male	31	
Female	71	
Mean Age (SD)	41.8	
Race		
Caucasian	66	64.7
African American	28	27.5
Other	8	5.9
Education		
HS	14	13.7
Some college	42	41.2
College grad	31	30.4
Post grad	14	13.7
Marital		
Married/Live with	55	53.9
Single	26	25.5
Divorced/Sep	19	18.6
Widowed	1	1.0
Income		
< $40,000	48	47
$40,000-$80,000	27	26.5
>$80,000	26	25.5
Job		
Full-time	49	48
Part-time	18	17.6
Unemployed	12	11.8
Other	23	22.5

Note. Inclusion criteria are men and women between the ages of 18 and 65. Exclusion criteria are people younger than 18, accompanied by a legal guardian, and who cannot read or write in English

Descriptive statistics, internal consistencies, and intercorrelations among variables included in the study

There were high correlations among expected variables such as the BSI-7 total and the PHQ-15 measure (.80**, p<.01), the anxiety dimension and the preoccupied

attachment style (.39**, p<.01) and total ER visits and hospital visits (.57**, p<.01) (Table 2). Additional correlations (Table 2) revealed significant results between the BSI-7 total variable and several other variables: Experiences in Close Relationships (ECR) Anxiety dimension (.26**, p<.01), secure attachment style (-.24*, p<.05), fearful attachment style (.28*, p<.05), preoccupied attachment style (.35**,p<.01), family medicine center visits (.38**, p<.01), Hospital visits (.34**, p<.01), ER visits (.26**, p<.01), Dr's rated health of patient's (-.45**, p<.01), Patient's rated health (.54**, p<.01), and cognitive (.21*, p<.05) and affective factors (-.46**, p<.01). Further, the individual PHQ-15 measure showed significant correlations with the ECR avoidance dimension (.24*, p<.05), secure attachment style (-.24*, p<.05), fearful attachment style (.27**, p<.01), family medicine center visits (.38**, p<.01), hospital visits (.21*, p<.05), patients rated health (.51**, p<.01), doctor's rated health of the patient (-.37**, p<.01), the cognitive factor (-.21*, p<.05), and the affective factor (-.33**, p<.01). The Anxiety dimension showed significant correlations with the avoidance dimension (.23*, p<.05), fearful attachment style (.25*, p<.05), and preoccupied attachment style (.39**, p<.01). The Avoidance dimension revealed significant correlations with secure attachment (-.50**, p<.01), fearful attachment style (.40**, p<.01), preoccupied attachment style(.19*, p<.05), the cognitive factor (-.20*, p<.05) and the affective factor (-.20*, p<.05). The secure attachment style variable revealed significant negative correlations with fearful attachment style (-.52**, p<.01), dismissive attachment style (-.21*, p<.05), and patient's rating of their health (-.20*, p<.05). Additionally, the secure attachment style correlated significantly with the affective factor (.37**, p<.01) and the cognitive factor (.28**, p<.01). The

fearful attachment style revealed correlations with preoccupied attachment style (.50**, p<.01), patient health (.23*, p<.05), the affective factor (-.31**, p<.01). The preoccupied attachment style showed a negative correlation with the affective factor (-.22*, p<.05). The total Family Medicine Center variable revealed significant correlations with patient (.46**, p<.01) and doctor's rated health of the patients (-.34**, p<.01). The total hospital visits of participants correlated with ER visits (.57**, p<.01), patient rated health (.35**, p<.01), and the affective factor (-.20*, p<.05) . The total ER visits correlated with patient rated health (.57**, p<.01) and doctor's rated health of patients (.35**, p<.01). Patient rated health is correlated with Doctor's rating of patients (-.54**, p<.01). Doctor's rating of patient's significantly correlated with the affective factor (p<.28**, p<.01). The cognitive factor is correlated with the affective factor (.70**, p<.01).

Additionally, the means and standard deviations are reported in Table 2. The mean and standard deviation for the BSI-7 is M=7.40, SD=6.61. The mean and standard deviation for PHQ-15 is M=8.76, SD=6.61. The mean and standard deviation for ECR Anxiety is M=19.09, SD=6.45. The mean and standard deviation for ECR Avoidance is M=15.05, SD=6.80. The mean and standard deviation for RQ Secure is M=4.44, SD=1.89. The mean and standard deviation for RQ Fearful is M=3.24, SD=2.06. The mean and standard deviation for RQ Preoccupied is M=2.62, SD= 1.69. The mean and standard deviation for RQ Dismissive is M=3.90, SD=1.79. The mean and standard deviation for FMC is M=4.23, SD=3.77. The mean and standard deviation for Hospital visits is M=.275, SD=.772. The mean and standard deviation for ER visits is M=1.20, SD=1.73. The mean and standard deviation for patient rated

health is M=2.78, SD=.910. The mean, standard deviation, and alpha for Doctor rated health is M=70.54, SD=20.2. The mean and standard deviation for the cognitive factor is M= 3.79 and SD=.707. The mean and standard deviation for the affective factor is M= 4.24 and SD=4.59. Additionally, the chronbach alphas for internal consistency was calculated for the following measures. The BSI-7 measure produced an alpha of .84. The PHQ-15 produced an alpha of .87. The ECR Anxiety dimension produced an Alpha of .63. The ECR Avoidance dimension produced an Alpha of .81. The Total Alpha for the ECR measure is .75.

Table 2

Descriptive statistics, internal consistencies, and intercorrelations among variables included in the study

	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. BSI7	7.40	6.61	1													
2. PHQ-15	8.76	5.56	.80**	1												
3. ECR Anxiety	19.09	6.45	.26**	.22	1											
4. ECR Avoidance	15.05	6.80	.19	.24*	.23*	1										
5. RQ Secure	4.44	1.89	-.24*	-.24*	-.13	-.50**	1									
6. RQ Fearful	3.24	2.06	.28*	.27**	.25*	.40**	-.52**	1								
7. RQ Preoccupied	2.62	1.69	.35**	.17	.39**	.19*	-.25	.50**	1							
8. RQ Dismissive	3.90	1.79	.12	.17	-.01	.12	-.21*	.20	-.02	1						
9. FMC	4.23	3.77	.38**	.38**	.11	.15	-.15	.07	.14	-.08	1					
10. Hospital	.275	.772	.34**	.21*	-.04	.19	-.15	.10	.11	-.02	.11	1				
11. ER	1.20	1.73	.26**	.18	.07	.13	-.17	.10	.07	- .07	.17	.57**	1			
12. Pt Health	2.78	.910	.54**	.51**	.12	.19	-.20*	.23*	.09	.05	.46**	.35**	.33**	1		
13. Dr rated Health	70.54	20.2	-.45**	-.37**	.03	-.05	.15	.04	.07	-.12	-.34**	-.36	-.42**	-.54**	1	
14. Cognitive Factor	3.79	.707	.21*	-.22*	-.06	-.20*	.28**	-.15	-.10	-.17	-.10	-.10	-.07	-.05	.16	1
15. Affective Factor	4.24	4.59	-.46**	-.33**	-.10	-.25*	.37**	-.31**	-.22*	-.18	-.15	-.20*	-.19	-.22	.28**	.70**

Note: n= 102.** p<.01,* p<.05

Interrater Reliability for the SCORS-G ratings

The means and standard deviations of the SCORS-G variables used in the analysis based on early memory narratives are reported in Table 3. The interrater reliability ratings on the eight SCORS variables were evaluated via a one-way random effects model ICCa (Shrout & Fleiss, 1979). The ICC used is a generalizable calculation of ICCs (Meyer et al., 2002). Mean SCORS were used in the analyses across two raters for each early memory narrative. The Spearman-Brown correction for the one-way random effects model, ICCb, was calculated to examine the reliability of the mean score for each of the SCORS-G variables. ICCs are considered to be excellent if greater than .74, good if ranging from .60 to .74, fair if ranging from .40 to .59, and poor if under .40 (Fleiss, 1981). The uncorrected ICC values fell within the fair to excellent range. The Spearman-Brown corrected ICC's for the eight SCORS-G variables were considered to fall within the range of good to excellent reliability with the exception of the EIM variable (Table 3).

Table 3

Inter-rater Reliability of SCORS-G Dimensions

	SCORS-G Dimensions		ICCa	ICC Spearman-Brown Correctionb
	X	SD		
COM	3.9	.82	.76	.86
AFF	4.5	.73	.84	.92
EIR	5.3	.78	.76	.87
EIM	4.0	.31	.42	.59
SC	3.7	.69	.60	.75
AGG	4.0	.31	.49	.66
SE	4.6	.62	.72	.84
ICS	4.7	.36	.44	.61

Note. N=102. ICC= intraclass correlation coefficients; ICCa= Oneway Random Effect; ICCb= Spearman-Brown Correction & Double Coding; COM=complexity of representation; AFF=affective quality of representation; EIR=emotional investment in relationships; EIM=emotional investment in values and moral standards; SC=understanding of social causality; AGG=experience and management of aggressive impulses; SE=self-esteem; ICS=identity and coherence of self

Factor Analysis of the SCORS-G ratings

It was hypothesized that an exploratory factor analysis of the SCORS-G would reveal two factors: cognitive and affective (Hypothesis 1), as described in the literature (Cogan and Porcerelli, 1996, Fowler et al., 1995, Hibbard, Hilsenroth, Hibbard, & Nash, 1995; Porcerelli, Cogan, & Hibbard, 1998; Porcerelli, Hill, & Dauphin, 1995; and Eudell-Simmons, Stein, DeFife, Hilsenroth, 2005). A factor analysis was conducted to determine what, if any, underlying structures exist for the following 8 variables: Complexity of representations of people (COM), Affective quality of representations (AFF), Capacity for emotional investment in relationships (EIR), Emotional investment in values and moral standards (EIM), Understanding of social causality (SC), Experience and management of aggressive impulses (AGG), Self-esteem (SE), and Identity and coherence of self (ICS) (Table 4 and Table 5). Principal Axis Factoring was conducted using an Oblimin rotation with Kaiser Normalization. The analysis produced a two factor solution of the eight SCORS-G variables which is evaluated with the following criteria: eigenvalue, variance, structure matrix. The total variance explained by the initial eigenvalues is 63% for factor one and 16% for factor two (Table 4). The structure matrix revealed that each factor appears to have loadings representative of cognitive (COM,1.0; SC,.93) and affective variables (AFF, .95; EIR, .78; AGG, .73; SE, .92) (Table 5), thus factor one is labeled an affective factor and factor two is labeled a cognitive factor. However, there are loadings on each factor that are not consistent with the cognitive (EIR, .75) and affective (EIM, .82, ICS, .83) themes in the literature.

Factor Analysis

Table 4

Total Variance Explained, Initial Eigenvalues

	Total	% of Variance	Cumulative %
Affective	5.07	63.40	63.40
Cognitive	1.24	15.55	78.95

Table 5

Structure Matrix

	Affective	Cognitive
COM	.45	1.0
AFF	.95	.40
EIR	.78	.75
EIM	.82	.47
SC	.52	.93
AGG	.73	.35
SE	.92	.46
ICS	.83	.45

Note. COM=complexity of representation; AFF=affective quality of representation; EIR=emotional investment in relationships; EIM=emotional investment in values and moral standards; SC=understanding of social causality; AGG=experience and management of aggressive impulses; SE=self-esteem; ICS=identity and coherence of self

Stepwise Regression of Attachment Variables for 3 Outcome Variables

A forward selection stepwise regression was conducted to determine which independent variables (secure, preoccupied, fearful, dismissive, anxiety, and avoidance) make meaningful contributions to the overall prediction of somatization (PHQ-15, BSI-7), physical health (Doctor's rating of patient, patient's rating of self)

and healthcare utilization (Emergency room (ER) visits, Hospital visits, and Family Medicine Center (FMC) visits) based on Hypothesis 2, that the model of attachment will predict somatic symptoms, healthcare utilization, and physical health in a primary care sample of men and women.

Regression results indicate an overall model of one predictor (fearful) that significantly predicted Self-reported health (N=102), R^2= .052, R^2adj=.043, F(1,100)=5.49, p=.021. This model accounted for 5.2% of the variance in the participant's self-reported health. Thus, the more fearful attachment style a participant had, the more likely they were to report having poor health. A summary of the regression model and bivariate and partial correlation coefficients are presented in Table 6. Regression results indicate that an overall model of one predictor (preoccupied) that significantly predicted BSI-7 total (N=102), R^2=.122, R^2adj=.113, F(1,100)=13.86, p=.000. This model accounted for 12.1% of the variance in participant's total Somatization. Thus, the more preoccupied attachment style a participant had, the higher the somatic symptoms they endorsed. A summary of the regression model and bivariate and partial correlation coefficients are presented in Table 6. Regression results indicate an overall model of one predictor (fearful) that significantly predicted the PHQ-15 total (N=102), R^2=.075, R^2adj=.065, F (1,100)=8.07, p=.005. This model accounted for 7.5% of the variance in the participant's total somatization for the PHQ-15 measure. Thus, the higher rating on a fearful attachment style, the more likely a participant endorsed somatic symptoms. A summary of the regression model and bivariate and partial correlation coefficients are presented in Table 6.

Table 6

Stepwise Regressions of Attachment Variables for 3 Outcome Variables

Step	R	R^2	R^2adj	ΔR^2	Fchg	p	df1	df2	β	t	Bivariate r	Partial r
a.Fearful	.228	.052	.043	.052	5.49	.021	1	100	.228	2.34	.228	.228
b.Preocc.	.349	.122	.113	.122	13.9	.000	1	100	.349	3.72	.349	.349
c.Fearful	.273	.075	.065	.075	8.07	.005	1	100	.273	2.84	.273	.273

Note. Fearful= Fearful attachment style and Preocc.=Preoccupied attachment style. Outcome Variables= a. Self-Reported Health, b. BSI-7, c. PHQ-15.

Stepwise Regressions of Object Relations/Interpersonal Relatedness Variables for 5 Outcome Variables

A forward selection stepwise regression was conducted to determine which independent variables (affective factor and cognitive factor) make meaningful contributions to the overall prediction of somatization (PHQ-15, BSI-7), physical health (Dr's rating of patient, patient's rating of self) and healthcare utilization (ER visits, Hospital visits, and FMC visits) based on Hypothesis 3 which stated that the model of interpersonal relatedness will predict somatic symptoms, healthcare utilization, and physical health in a primary care sample of men and women. Regression results indicate an overall model of one predictor (Affective) that significantly predicted Total Overnights (N=102), R^2=.041, R^2adj=.031, F(1,99)=4.17, p=.044. This model accounted for 4.1% of the variance in the participant's total overnight hospital stays. Thus, a lower score on the affective factor of the SCORS measure, the more likely a person was to have overnight hospital stays. A summary of the regression model and bivariate and partial correlation coefficients are presented in Table 7. Regression results indicate an overall model of one predictor (Affective) that significantly predicted self-reported health (N=102), R^2=.048,

R^2adj=.039, F(1,98)=4.99, p=.028. This model accounted for 4.8% of the variance for patient's rating of their health. Thus, the lower score on the affective factor of the SCORS measure, the lower someone rated their own health. A summary of the regression model and bivariate and partial correlation coefficients are presented in Table 7. Regression results indicate an overall model of one predictor (Affective) that significantly predicted the Doctor's ratings of the participant's health (N=102), R^2=.073, R^2adj=.064, F(1,98)=7.75 p=.006. This model accounted for 7.3% of the variance in the Doctor's ratings of the participant's health. Thus, the lower score on the participants' affective factor on the SCORS measure led to lower ratings of the participant's health by their doctors. A summary of the regression model and bivariate and partial correlation coefficients are presented in Table 7. Regression results indicate an overall model of one predictor (Affective) that significantly predicted the somatization measure BSI-7 total (N=102), R^2=.209, R^2adj=.201, F (1,98)=25.98, p=.000. This model accounted for 20.9% of the variance in participant's BSI-7 total. Thus, the lower score on the affective factor of the SCORS measure led to higher participant reporting of somatic symptoms. A summary of the regression model and bivariate and partial correlation coefficients are presented in Table 7. Regression results indicate an overall model of one predictor (Affective) that significantly predicted PHQ-15 total (N=102), R^2= .107, R^2adj= .097, F (1, 98)= 11.68, p=.001. This model accounted for 10.7% of the variance in participant's total on the PHQ-15 measure of somatization. Thus, the lower affective factor score, the more somatic symptoms participants endorsed. A summary of the regression model and bivariate and partial correlation coefficients are presented in Table 7.

Table 7

Stepwise Regressions of Object Relations/Interpersonal Relatedness Variables for 5 Outcome Variables

Step	R	R^2	R^2adj	ΔR^2	Fchg	p	df1	df2	β	t	Bivariate r	Partial r
a.Affect.	.202	.041	.031	.041	4.17	.044	1	98	-.202	-2.04	-.202	-.202
b.Affect.	.220	.048	.039	.048	4.99	.028	1	98	-.220	-2.23	-.220	-.220
c.Affect.	.271	.073	.064	.073	7.75	.006	1	98	.271	2.78	.271	.271
d.Affect.	.458	.210	.202	.210	25.98	.000	1	98	-.458	-5.09	-.458	-.458
e.Affect.	.326	.107	.097	.107	11.68	.000	1	98	-.326	-3.42	-.398	-.326

Note. Affect.=Affective factor. Outcome Variables= a. Total Overnights, b. Self-reported health, c. Doctor's rated health, d. BSI-7, e. PHQ-15.

Stepwise Regressions of Attachment and Object Relations/Interpersonal Relatedness Variables for 5 Outcome Variables

A forward selection stepwise regression was conducted to determine which independent variables (affective factor, cognitive factor, anxiety, avoidance, fearful, preoccupied, dismissive, and secure) make meaningful contributions to the prediction of somatization (PHQ-15, BSI-7), physical health (Doctor's rating of patient, patient's rating of self) and healthcare utilization (Emergency Room visits, Hospital visits, and Family Medicine Center visits) based on Hypothesis 4 which states that the model of Attachment and the model of Object Relations/Interpersonal Relatedness together better predict the degree of somatization, physical health, and healthcare utilization experienced among participants than either model alone.

Regression results indicate an overall model of one predictor (affective factor) that significantly predict Total Overnights (N= 102), R^2= .041, R^2adj=.031, F (1,98)=4.17, p=.044. This model accounted for 4.1% of the variance in participant's total overnight

hospital stays. Thus, a lower score on the affective factor led to more hospital overnight stays for participants. A summary of the regression model and bivariate and partial correlation coefficients are presented in Table 8. Regression results indicate one predictor (fearful) that significantly predicts Self-Reported Health (N=102), R^2=.062, R^2adj=.054, F(1,98)=6.44, p=.013. This model accounted for 6.2% of the variance in the participant's rating of their own overall health. Thus, the more fearful one's attachment style, the higher likelihood they would rate their overall health as poor. A summary of the regression model and bivariate and partial correlation coefficients are presented in Table 8. Regression results indicate one predictor (affective factor) that significantly predict Doctor's Rated Health (N=102), R^2=.073, R^2adj=.064, F (1,98)=, p=.006. This model accounted for 7.3% of the variance in Doctor's ratings of participants overall health. Thus, the lower score on the affective factor for the participant's, the lower the doctor's rating of that person's overall health. A summary of the regression model and bivariate and partial correlation coefficients are presented in Table 8. Regression results indicate two predictors (affective and preoccupied) that significantly predict BSI-7 (N=102), R^2=.282, R^2adj=.267, F (2,97)= 19.01, p=.000. This model accounted for 28.2% of the variance for both scales used to measure somatization. Thus, the lower one's affect and the more preoccupied attachment style they have, the higher rate of somatic symptoms they experience. A summary of the regression model and bivariate and partial correlation coefficients are presented in Table 8. Regression results indicate two predictors (Affective and Anxiety) that significantly predict the PHQ-15 scale total (N=102), R^2=.150, R^2adj=.132, F (1, 97)=8.56, p=.000. The R^2 for affective

accounted for 10.7% of the variance and the anxiety added 4.3% to the significant prediction. The final model accounted for 15% of the variance for the PHQ-15 measure of somatization. Thus, the lower one's affect and the higher anxiety they have, the more somatic symptoms they experience. A summary of the regression model and bivariate and partial correlation coefficients are presented in Table 8. A Summary of all Regression results are in Table 9.

Table 8

Stepwise Regressions of Attachment and Object Relations Variables for 5 Outcome Variables

Step	R	R^2	R^2adj	ΔR^2	Fchg	p	df1	df2	β	t	Bivariate r	Partial r
a.Affective	.202	.041	.031	.041	4.17	.044	1	98	-.202	-2.04	-.202	-.202
b.Fearful	.248	.062	.052	.062	6.44	.013	1	98	.248	2.54	.248	.248
c.Affective	.271	.073	.064	.073	7.75	.006	1	98	.271	2.78	.271	.271
d.Affective	.458	.210	.202	.210	26	.00	1	98	-.399	-4.53	-.458	-.418
Preocc.	.531	.282	.267	.072	9.7	.02	1	97	.275	3.12	.360	.302
e.Affective	.326	.107	.097	.107	11.68	.001	1	98	-.306	-3.21	-.326	-.314
Anxiety	.387	.150	.132	.043	4.95	.028	1	97	.210	2.22	.239	.221

Note. Affective= Affective factor. Outcome Variables= a. Total Overnights, b. Self-reported Health, c. Doctor's rated health, d. BSI-7, e.PHQ-15.

Table 9

Attachment, Object Relations, and Outcome Variables

Outcome Variables	Affective	Fearful	Affective Anxiety	Affective Preoccupied	Preoccupied
Self-reported Health	ΔR^2= .048 β =-.202	ΔR^2=.05 β=.228			
PHQ-15	ΔR^2=.107 β=-.326	ΔR^2=.075 β= .273	ΔR^2 = .107 β = -.306 ΔR^2 = .043 β = .210		
BSI-7	ΔR^2=.210 β=-.458			ΔR^2 = .210 β = -.399 ΔR^2= .072 β = .275	ΔR^2=.122 β = .349
Total Overnights	ΔR^2=.041 β= -.202				
Doctor's rated health	ΔR^2 = .073 β= .271				

Chapter IV: Discussion

The present study assessed whether self-reported attachment styles and object representations (e.g., SCORS-G ratings of early memory narratives) could predict health behaviors in a primary care sample. The findings from this study indicate that several of the independent variables of attachment and the affective factor of object representations predicted health behaviors. Additionally, there were high intercorrelations between many of the measures in this study. The results of this study suggest that individuals who have an insecure attachment style or dimension (e.g., preoccupied attachment style, fearful attachment style, or anxious attachment dimension) appear to report unexplained somatic symptoms in addition to poorer overall health. Further, individuals with negative affect in their object representations may be more likely to report unexplained physical symptoms, utilize healthcare services excessively, report poor general health, and experience bodily pain. Similarly, these individuals are seen as demonstrating poor health by their primary care doctors.

Attachment and Poor Health

The results indicated that participants who endorsed a fearful attachment style were more likely to rate their own health as poor and report somatic symptoms. This suggests that there may be an attachment component when rating one's own health and one's symptom perception. Fearfully attached individuals tend to view themselves and others in a negative light (Bartholomew, 1990; Mikulincer & Shaver, 2007). Thus, they may be less likely to take care of themselves physically and/or have poor affect-regulating abilities. These processes may lead them to develop a negative

self-concept. Previous findings lend support to the concept that fearful attachment individuals have low self-esteem, increased subjective distress, and an increased focus on negative affect. Thus, they may be more likely to report poor health and somatic symptoms (Bartholomew, 1993; Ciechanowski et al., 2002; McGrady et al., 1999). Further, studies have reported that a focus on negative processes is related to self-reported health complaints that do not have a physical cause (Russo et al., 1997). The negative view of others connected to a fearful attachment style may suggest less healthcare seeking overall and more health problems (Ciechanowski et al., 2002).

In the present study, participants who endorsed a preoccupied attachment style were more likely to endorse somatic symptoms. That is, an individual who tends to need continuous reassurance from others, is entangled in worries about relationships, and perseverates on their vulnerabilities to capture the others concern may tend to report vague and unexplained symptoms. Preoccupied attachment style has many of the same components as fearful attachment style with the exception that preoccupied individuals often view others in a positive light, where fearful people view others in a negative light. As a result, someone with a preoccupied attachment style may seek high levels of care from health care providers to meet their needs (Ciechanowski et al., 2003). However, their needs are never fully met by the other, thus leading them to feel rejected, which perpetuates their negative sense of self. This finding is further supported by previous research stating that attachment is an important factor in assessing healthcare utilization and symptom expression (Ciechanowski et al., 2002).

The present study shows the negative dimension of self being related to health. Thus, when one rates themselves as having poorer health, this may be a reflection of

their negative feelings of the self and problems with attachment. Lopez, Melendez, Sauer, Berger, and Wyssman (1998) completed a study which looked at IWM's and self-reported problems in a non-clinical sample. Their findings suggested that participants with positive self models (secure and dismissive) acknowledged significantly fewer current problems than those with negative self-models (preoccupied and fearful). Further, it has been indicated by previous research that individuals with negative self models experienced difficulties in adjusting to life's stressors (Bartholomew & Horowitz, 1991; Ciechanowski et al., 2002; Feeney, 1998; Horowitz, Rosenberg, & Bartholomew, 1993; Lopez et al., 1998). For instance, Ciechanowski and colleagues (2003) found that a common factor related to preoccupied and fearful attachment and higher symptom reporting was low self-esteem and negative affect. To take this point a step further, low health may be conflated with poor self-esteem and thus individuals with a negative self-model may be rating their own self-worth in addition to rating their physical health as poor. This begs the question, are health and low self-esteem not just related, but operating as similar mental processes which result in a generally low feeling that can be translated as feeling physically unwell? Assessing the relatedness between health and self-esteem would be worthy to explore in further research to target possible connections among the two and the mechanisms which underly them. On the contrary, it could be possible that one's health really is lower and they are rating their health based on their actual physical experiences. However, we can wonder, what leads to poor health? And yet further, does attachment style have a stable and continuous connection to one's health behavior.

For instance, Trzesniewski and colleagues (2006) found that adolescent's with low self-esteem had poorer mental and physical health, economic difficulty, and higher levels of criminal behavior during adulthood, than those adolescents with high self-esteem. Further, a study found that participants with unsupportive social relationships and low self-esteem were more likely to experience an increase in psychological and somatic problems following stressful days, than participants who experienced high self-esteem and a strong support system (DeLongis, Folman, & Lazarus, 1988). Another study measured relationships of children's illness and mother's stress response to their illness, finding that mother's often had lower self-efficacy when their children were experiencing chronic illness (Silver, Bauman, Laurie, & Ireys, 1995).

Attachment and Somatic Symptoms

A further outcome of this study resulted in attachment style being a significant predictor of somatic symptoms. Previous research supports this finding (Ciechanowski et al., 2002) and informs the process of insecure attachment, specifically fearful and preoccupied, as a key aspect of one's tendency to experience and report vague and unexplained symptoms. Because attachment style has a distinct relational component, it may be likely that an insecurely attached individual seeks care from their Primary Care Provider (PCP) by displaying vague symptoms to increase the possibility that they may return and continue an ongoing relationship with their PCP. Additionally, an added component is that one who is anxiously attached is preoccupied with the other and either fears rejection or feels perpetually abandoned in relationships. Thus, a PCP who cannot provide the patient with a clear

cut diagnosis may have failed to meet the patient's needs thus this process recapitulates the patient's ongoing schemas that they are "not good enough" to be diagnosed and in turn, they feel they are "not good enough" for others. A primary concern for these patient's is that their need to be cared for leads them to be high utilizers of healthcare (Ciechanowski et al., 2002). This promotes a revolving door pattern that has not been remedied at the present time and challenges physicians expand their usual way of practicing in order to care for patients presenting with somatic symptoms.

As such, further involvement with somatic patient's may not just be recommended, but required by the physician, in order to provide a service that is effective and efficient. For instance, a typical healthcare model in primary care involves the patient and doctor interaction at approximately 10-30 minutes per patient for a visit (Ciechanowski et al., 2002). However, if a patient continues to return with symptom reporting that is vague and difficult to follow, the physician is actually spending much more time with this patient due to more scheduled visits and less time with other patients.

Further, if the doctor can spend more time with the patient presenting with vague symptoms, then perhaps these patients wouldn't need to return. In the literature, for individuals with somatic symptoms, reassurance that the patient does not have a medical condition has not been effective and telling the patient that their symptoms are a manifestation of psychological distress has been equally unhelpful (Ciechanowski et al., 2002). Thus, there may be a more effective way to approach these patients by using empathic statements and their general approach that is specific

to the relationship with the doctor, due to the relational aspect of attachment, and allow them to feel more empowered through specific intervention, due to the sense of self aspect of attachment, in that relationship.

Attachment and Doctor/Patient Relationships

Supportive doctor and patient relationships are critical in providing the best patient care (Morgan, 2003). There are a multitude of ongoing studies which emphasize the use of supportive interventions that remain in the purview of a doctor's brief time frame with patients. Attachment theory emphasizes that relationships are dynamic and reciprocal (Pietromonaco, Uchino & Schetter, 2013). Pietromonaco and colleagues (2013) described the field of relationship science as a necessary avenue in understanding patients health behaviors. More specifically, they took an interpersonal perspective and a dyadic approach to their explanation. It is often the case that patients with an insecure attachment style engage in attachment behavior that draws them closer to their PCP's to help them self-regulate (Pietromonoco et al., 2013). However, these relationships are often difficult, time consuming, and potentially overwhelming (Maunder et al., 2006, Noyes et al., 2003; Peitromonoco et al., 2013).

A focus on how insecure patients interact with others and the doctor's own reactions to these patient's often goes unnoticed in the literature and in the setting itself (Maunder et al., 2006; Pietromonoco et al., 2013). It has been introduced that the partner of the patient, who may accompany the patient to appointments, can be informative in the process as well (Pietromonoco, 2013). For instance, knowing that the presence of the partner can either calm or exacerbate patient behaviors can inform

the doctor of the patient's interpersonal style and insight into the patient's most important relationship dyad (Pietromonoco et al., 2013).

Recent research has recommended that primary care physicians and other health care providers integrate attachment theory into practice in order to improve health-related communications in medical settings (Hooper, Tomek, & Newman, 2012). Further, adopting a flexible treatment style which encompasses a patients attachment pattern promotes optimal care for these patients (Thompson & Ciechanowski, 2003). Holwerda and colleagues (2013) assessed the degree of trust that cancer patients had from an attachment perspective. They found that insecurely attached patients trusted their doctor less than secure patients and were less satisfied with their level of care. Thus, there may be a way in which physicians can respond to patients which allows them to feel more trusting and safe (Holwerda, 2013). However, one may argue that physicians are tied by the strict guidelines within the healthcare system which limit their time with patients. Thus, rigid rules may not allow the doctor to be more flexible. It appears that the system needs to operate in a way that allows doctor's to spend more time with difficult patients.

Time and Empathy

Dugdale, Epstein, and Pantilat (1999) examined the effects of limiting time on the patient-doctor relationship. They argued that there is minimal research on physician time as a resource and with the demands, specifically in managed care and providing best patient care, time is increasingly valuable (Dugdale et al., 1999). They also introduce practical strategies that can enhance quality of care with the amount of time available. For instance, they emphasized the importance of setting an agenda early in

the visit, listening actively to the patient's story, being aware of the emotional aspects presented by the patient, demonstrating empathy, involving the patient's thoughts about what may be going on, establish agreement on goals and take advantage of the patient's knowledge of their own experiences (Dugdale et al., 1999). They argue that all of these tasks can be accomplished in a brief appointment. They further emphasize that increasing a physicians' control over their schedules can allow for more opportunity to meet a patient's needs. For instance, building appointment times of different lengths can allow the physician to gather more information from more difficult patients. Additionally, a team approach, which may include services such as behavioral health has been an effective resource to promote integration of mental health services within the primary care setting.

Morgan (2003) reported that patient's satisfaction with their doctors often depended on their perceived experience with the doctor's interpersonal and clinical skills. Further, it has been found that patients who were more satisfied with their appointments experienced a reduction in symptom severity (Fitzpatrick & Hopkins, 1983). Maintaining a supportive doctor-patient relationship often involves a sense of mutuality which invites the patient to be an active participant in their care and the doctor to provide ongoing openness, sensitivity, and concern when meeting the patient where they are at (Morgan, 2003). Studies have shown that there are two distinct styles of doctors' approach to their patients, the doctor-centered or patient-centered approach (Byrne & Long, 1976; Morgan 2003). The doctor-centered approach often involves the doctor focusing on the physical aspect of disease, asking close ended questions such as, "how long have you been in pain? Is it sharp or dull?"

The doctor is attempting to reach a conclusion regarding the patient's illness that fits with in his or her framework.

However, the patient-centered approach takes a different perspective in which the doctor adopts a flexible approach and encourages their patients to actively participate in the consultation. Key features include spending more time by listening, responding to patient cues, encouraging patients to express their feelings, demonstrating concern by clarifying patient statements, and being more participative overall with the patient interaction. Thus, they take a perspective which encompasses that patients subjective experience and own meaning of their illness which may lead to understanding psychosocial underpinnings (Morgan, 2003; Mead and Bower, 2000). The patient-centered perspective is conducive to working with and understing one's attachment style. Overall, these approaches reflect distinct differences in communication style and attitudes which remain critical to how doctor's utilize their time with patients.

Pressures of time may result in a shorter and more controlled doctor-centered approach with patients. Thus, there is less of a participatory role from the patient and fewer questions regarding the patient's psychosocial functioning. However, Ridsdale and colleagues (1992) measured doctor's interactions with their patient's after receiving 10 additional minutes per patient appointment. The outcome revealed that doctor's asked more questions, but tended to remain within their typical communication style with extra time. This was a favorable outcome for doctor's who had a communication style involving open ended, empathic, and patient-centered questions. They often obtained further important information regarding patient presentation and spent additional time with a certain patients. Further, these doctor's

limited the number of patients they saw in order to ensure they had enough time with patients. Doctor's who limited their communication to close ended questions did use the extra time, but did not shift their communication style. As stated, it does require a greater amount of time to ask more questions, however attending to the patient's concerns effectively may lead to less return visits (Morgan, 2003). Thus a bridge between healthcare and doctor flexibility may be needed to address these issues.

Halpern (2007) discussed that a lack of empathy often arises when the doctor's encounter a difficult patient. The focus remained on how conflicts can upset both the doctor and the patient in a situation in which support and empathy are still needed. While maintaining empathy is not a cureall for doctor-patient conflicts, a few strategies were suggested. Previous research has stated that doctor's must remain empathic with difficult patient's, but how to do this has been explored minimally (Halpern, 2007). Recognizing one's negative emotions at the present time is important in tapping into self-awareness and can reduce errors while helping resolve conflict on the spot. Reflecting on these emotions can facilitate self-awareness and allow the doctor to gain understanding about how their own feelings provide information about what the patient may be feeling. This curiosity is key, but the doctor can further attune to the emotional needs of the patient by listening to the patient's story. The emotional meanings of the patient's words can clue the doctor into seeking alternative ways of working with them.

Further, attending to nonverbal communication such as, signs of anxiety, depression, grief and loss is an added piece of information for the doctor's to obtain (Halpern, 2007). Lastly, patient's feedback to their doctor's is likely not always going

to be positive. However, the patient having the time to express their positive and negative feelings, even about the doctor, allows them to feel heard where the doctor can tolerate their angry feelings (Halpern, 2007). An ongoing communication style of curiosity and support is important to the patient's perceived and actual level of care (Halpern, 2007).

Object Relations/Interpersonal Relatedness

Individuals who had lower affective ratings from the early memory narratives reported more overnight hospital stays, somatic symptoms, their own health as poor, and were rated by their doctor's as having poorer overall health. The affective factor is comprised of the following SCORS-G dimensions: affective quality of representations, emotional investment in relationships, emotional investment in values and moral standards, experience and management of aggressive impulses, and self-esteem. Scoring low on the affective factor suggests that individuals tended to experience relationships as somewhat unpleasant, hostile, or malevolent, tended to focus on their own needs in relationships, had difficulty managing their own aggressive impulses, experienced low self-esteem, and/or had an unstable sense of self. These results suggest that there appears to be an affective component connected to health.

Affect and Health

Affect has a place in how we think and feel about ourselves, our interpersonal relationships, and our emotion-regulating capacities. One can determine that affect, whether positive or negative, has an important role in everyday functioning regarding internal and external mental processes. It is thus important to credit affect as a crucial

indicator of how one experiences and expresses their own health behavior. Studies have connected affect to health behavior (Bowen, Alfano, McGregor, & Anderson, 2004; Cohen & Lemay, 2007; Hu & Gruber, 2008; Peters, Lipkis, Diefenbach, 2006; Pressman & Cohen, 2005; Versteeg, Pedersen, Erdman, Van Nierop, DeJaegere, & Van Domburg, 2009) where most outcomes found a significant relationship between the two. High positive affect and low negative affect were found to be connected to lower levels of distress, fewer depressive symptoms, engaging in activities, and higher self-reported health functioning in older adults (Hu & Gruber, 2008). Further, health behavior has often been described in cognitive terms and studies have historically negated the self-regulation component that is consistent with affect (Peters, Lipkis, Diefenbach, 2006). To appreciate a comprehensive framework of understanding health, it is important to acknowledge that when behavioral reactions occur, they can be triggered as much by affect as by cognitive processes (Peters et al., 2006).

In the present study, a lower affective rating resulted in higher healthcare utilization, particularly total overnight hospital stays, which may indicate a lack of affect regulation when one feels in need. A limitation of the study remains that one's specific health condition was not asked as participant's filled out the forms. However, whether someone has a chronic medical condition, is reporting vague symptoms, or experiences both, it may be likely that excessive overnight hospital stays are representative of a need to be cared for and thus related to affect. There appears to be limited research on the connection between affect and healthcare utilization. Cameron, Leventhal, & Leventhal (1993) addressed the cognitive and emotional

factors of healthcare utilization where they found that care seeking was guided by a sense of a serious health threat, feeling that one cannot cope with the threat, and ongoing stress. This enhances the need to advance one's understanding of how cognitive and affective factors can inform one's approach to high utilizers of care. For instance, Halpern (2007) stated that emotional attainment and empathy are motivated by cognitive and affective interest in one another.

The affective factor of the SCORS-G predicted participants who endorsed a greater degree of somatic symptoms. It is thus another example which supports the importance of affect and its place in understanding symptom behavior. Illness behavior can be described as a maladaptive communication of distress due to stressful environmental factors (Stuart & Noyes, 1999). The particular focus on affect details the alexythymic nature of patients presenting with somatic symptoms, in that there is an inability to distinguish one affect from another (McDougall, 1989). Thus, an "acting out" can occur as a defense against mental pain and increase one's vulnerability to psychosomatic processes.

Studies have shown that patients with somatoform disorders are more alexithymic than non-clinical populations (Bailey & Henry 2006; Waller & Scheidt, 2004). These findings suggest that a tendency to overly engage in fantasy life and trouble identifying emotions are prominently connected to somatization and are likely mediated by negative affect (Bailey & Henry, 2006). Affect occurs in mental and physical states, and rejecting the psychological aspect of painful emotions can be manifested physically (McDougall, 1989). Research on the medical front has found that certain factors, such as negative affect, have contributions to physical pain

(Staud, Vierck, Robinson, & Price, 2006). Further, somatic symptoms have been connected to the inability to experience and differentiate affects and communicate them in a healthy way (Waller & Scheidt, 2006). Affect dysregulation is often present in people with somatic symptoms (Waller & Scheidt, 2006) and personality characterstics develop which are likely to go unnoticed by the person experiencing them, but elicit irritability in those people observing them. Thus, it has been found that the more difficult a patient is perceived by their physician, the higher likelihood that the patient was identified as having a personality disorder. Further, these "difficult" individuals were found to have multiple unexplained symptoms comorbid with other mental illness factors (Hahn, Thompson, Wills, Stern, & Budner, 1994). Additionally, physician frustration was predicted by increased vague medical complaints (Lin, Katon, Von Korff, Bush, Lipscomb, Russo, & Wagner, 1991)

Physiological changes can occur when one is exposed to early stress, which may have an effect on one's physical functioning (Suomi, 1991). Many other factors, including traumatic experiences, can also lead to poor physical health. Thus, we cannot determine whether negative affect is present when one has preexisting medical conditions, exists as a precursor to poor health, or has a mediating component. With this said, affect can be considered an important factor in one's mental and physical health and thus should be recognized as a key component when assessing for one's psychological functioning.

Multimethod Approach

It is important to note that in the present study, more than one method was used to assess the health of a person. In obtaining a doctor's rating of the patient's health and

the patient's rating of their own health there are subjective and objective factors at work that connect affect to health and symptom behavior. In addition to a self-report method of assessing health, doctor's ratings, also known as an informant-report test, are used to rate a person's characteristic patterns of behavior (Bornstein, 2007). Bornstein (2007) also elaborated on the process-based framework, which explains that measures are structures that promote meaningful integration of scores. The process-based framework includes the inferences that people draw regarding a variety of internal and external experiences (Buehner & McGregor, 2006; Bornstein, 2007). When self-report and informant report tests converge, we can gain more confidence that there is a relationship to poor health. We are not only relying on one measure, but two measures that are different in method and work to reach the same outcome.

An additional method was applied where participants were primed to integrate their own cognitive and affective themes by attributing meaning to a construct that does not denote a right or wrong answer. For instance, in the present study participants were asked to give narrative accounts of four early memories. They were asked a specific question, but were not directed on which type of memory to provide. This constructive test is distinguished from a stimulus-attribution test because it requires respondents to create new information with little to no guidance from the examiner and without a stimulus (Bornstein, 2007). In past studies, the SCORS-G has produced more than two factor scores as a part of the factor analysis (Stein et al., 2012). However, in the present study two factors were found, cognitive and affective, and were consistent with past loadings in the original SCORS studies.

Attachment and object relations theory are similar models that are distinguished by their theoretical understanding in development of one's personality and interpersonal functioning. However, each theory takes into account the importance of early childhood relationships. Results indicated that preoccupied attachment style added to the affective factor on one measure of somatization and the anxiety dimension added to the affective factor on another measure of somatization. Thus, these findings suggest that different aspects of attachment and affect are important as self/other models in predicting symptom behavior. Further, there is something that each factor adds to the outcome of health, which produces a more meaningful picture of how one perceives their own symptoms.

One hypothesis may be that affect has broader implications for overall functioning and mental functioning. Thus, this influences how one thinks about oneself, but cares for one's physical health. The anxiety component of the attachment model suggests that a person has a fear of abandonment. Thus, an individual who often experiences a negative sense of self and a positive sense of other may in turn have poor affect regulating abilities. While an anxiously attached individual is excessively seeking care from another, fears abandonment and rejection, and experiences a negative sense of self, there is likely a continuously strong affective component present simultaneously.

Limitations

The present study has limitations which include the study design, measures used, and sample size. The design of the study was seen as an efficient way to capture participant responses in a fast-paced primary care setting. However, the rushed and

interrupted nature of the environment may have impeded on patient responses, thus limiting their time for reflection and more likelihood for them to feel forced to respond. Similarly, there were frequent interruptions while they were filling out the forms. For instance, participants may not have finished filling out the form before the doctor visited with them. As a result, due to time constraints, the participant's may have had to fill out the form after their appointment and did so in a hurried manner.

The measures in the study are best understood as brief measurements of functioning which may have limited a more comprehensive and thorough understanding of participant symptoms. A lengthy measure is likely to target more specific patient experiences and capture individual nuances. For example, regarding the Experiences in Close Relationships- short form, this study used a 12-item version of a scale that involved anxious and avoidant attachment dimensions. Although, the items for each measure had established validity in one previous study, there was not supporting evidence for validity of the individual items on scale dimensions in other studies. Contrary to this point, using the measure in the current study proved to be a useful tool in understanding anxiety and symptom perception. Thus, this measure may be an effective and efficient way to capture attachment style in a primary care setting or other settings of similar nature. Further, a study which measures the convergent validity of the ECR-short form may help establish this measure as an efficient tool used in fast-paced settings.

Early childhood memories were collected as a measure of interpersonal relatedness and functioning within relationships. However, some may argue that four early memories do not adequately depict one's interpersonal functioning and may

limit narrative accounts. Additionally, the present study would have benefited by including a question asking participant's to detail any chronic medical illnesses that have caused them ongoing physical pain. This information could provide additional understanding of medical illness and somatic symptoms. Lastly, the sample size of 102 participants consisted of 71 women and 31 men. While this ratio is typical of primary care, a larger sample size would have allowed for greater power in the statistical analyses as well as a larger pool of men and women.

In Summary

The present study assessed several factors from self and other models of attachment and object relations to predict somatic symptoms, physical health, and healthcare utilization. Several health related outcomes were significantly related to attachment and interpersonal models, which suggests that key aspects of these models are connected to and may influence health. Specifically, affect and attachment anxiety were found to have a consistent presence in relation to health. These findings can inform the healthcare system and physicians of the importance that attachment style and affective factors have in how one perceives and communicates their health symptoms.

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Appendix A

Experiences in Close Relationships Scale- Short Form (ECR-Short form)

Instruction: It does not matter if you are in a romantic relationship at this time. We are interested in how you generally experience relationships. Respond to each statement by indicating how much you agree or disagree with it. Mark your answer using the following rating scale.

		Strongly Disagree	Disagree	Disagree slightly	Neutral	Slightly Agree	Agree	Agree Strongly
1	It helps to turn to my romantic partner in times of need.							
2	I need a lot of reassurance that I am loved by my partner.							
3	I want to get close to my partner, but I keep pulling back.							
4	I find that my partner(s) don't want to get as close as I would like.							
5	I turn to my partner for many things, including comfort and reassurance.							
6	My desire to be very close sometimes scares people away.							
7	I try to avoid getting too close to my partner.							
8	I do not often worry about being abandoned.							
9	I usually discuss my problems and concerns with my partner.							
10	I get frustrated if romantic partners are not available when I need them.							
11	I am nervous when partners get too close to me.							
12	I worry that romantic partners won't care about me as much as I care about them.							

Appendix B

Relationship Questionnaire

Please rate each of the relationship styles below to indicate how well or poorly each description corresponds to your general relationship style.

(A) It is easy for me to become emotionally close to others. I am comfortable depending on them and having them depend on me. I don't worry about being alone or having others not accept me.

1	2	3	4	5	6	7
Not at all like me			Somewhat like me			Very much like me

(B) I am comfortable getting close to others. I want emotionally close relationships, but I find it difficult to trust others completely, or to depend on them. I worry that I will be hurt if I allow myself to become too close to others.

1	2	3	4	5	6	7
Not at all like me			Somewhat like me			Very much like me

(C) I want to be completely emotionally intimate with others, but I often find that others are reluctant to get as close as I would like. I am uncomfortable being without close relationships, but I sometimes worry that others don't value me as much as I value them.

1	2	3	4	5	6	7
Not at all like me			Somewhat like me			Very much like me

(D) I am comfortable without close emotional relationships. It is very important to me to feel independent and self-sufficient, and I prefer not to depend on others or have others depend on me.

1	2	3	4	5	6	7
Not at all like me			Somewhat like me			Very much like me

Are you most like: (A) or (B) or (C) or (D)

Appendix C

Brief Symptom Inventory-7 Somatization Scale

Over the last **2 WEEKS,** how often have you been bothered by any of the following problems?

	How much were you disturbed by...	Not at All		Sometimes		Extremely
1	faintness or dizziness	0	1	2	3	4
2	heart of chest pain	0	1	2	3	4
3	nausea or upset stomach	0	1	2	3	4
4	shortness of breath	0	1	2	3	4
5	hot or cold spells	0	1	2	3	4
6	numbness or tingling	0	1	2	3	4
7	feeling weakness in parts of the body	0	1	2	3	4

Appendix D

	Number of Times
Over the past year, how many times have you an appointment at the Family Medicine Center?	
Over the past year, how many times have you received treatment that required an overnight stay in the hospital?	
Over the past year, how many times have you received treatment at an emergency room or urgent care clinic?	

Appendix E

Early Memory Instructions to be read to participants:

"I am now going to ask you to tell me about some of your earliest memories. There are no right or wrong answers. Make sure you tell me specific memories."

Prompts for each memory:
- If the person does not report a specific memory, ask them to recall a ***"specific"*** memory.
- After they describe the memory, ask them **how old** they were in the memory.
- Ask them, "What do you recall **feeling** in the memory?"
- Ask them, "What do you imagine the ***others in the memory thinking and feeling.***"

(1) Think back as far as you can and tell me your **earliest childhood memory**

(2) Now tell me your earliest childhood memory of your **mother** (or mother figure)
Note: If one other of their EM's involved mother, ask for another memory of their mother.

(3) Now tell me your earliest childhood memory of your **father** (or father figure)
Note: If one other of their EM's involved father, ask for another memory of their father.

(4) Now tell me a memory of a **high point** in your life

Appendix F

Social Cognition and Object Relations Scale Rating Form

Please rate the patient on each of the following dimensions, using the 1-7 scales indicated. Each scale is on a continuum, with higher scores indicating more mature or healthy functioning.

Complexity of representations of people: *Complexity of representations of people: 1 = tends to be grossly egocentric, or to confuse his/her own thoughts, feelings, or attributes with others'; 3 = views the self and others with little subtlety or complexity; descriptions of people tend to be sparse, simple, one-dimensional, poorly integrated, or split into all-good or all-bad (e.g., tends to describe people as "nice," "mean," etc.); 5 = views of the self and others have some depth and complexity but are relatively conventional; is able to see people's strengths as well as weaknesses, and to take others' perspective;7 = is psychologically minded; views of people are subtle, rich, and complex.* ***1 2 3 4 5 6 7***
Affective quality of representations: *(what the person expects from, and experiences in, relationships): 1 = tends to have malevolent expectations of relationships; often experiences people as abusive or intentionally destructive;3 = tends to experience relationships as somewhat unpleasant, hostile, or indifferent, or to feel very alone; 5 =expectations of relationships are affectively mixed; tends to describe both positive and negative relationship experiences; 7 = has genuinely positive expectations of relationships, but is not "pollyannish" (i.e., can see people for what they are). Note: Where affective quality of representations of relationships tends to be bland, absent, limited, or defensively positive, code "4."* ***1 2 3 4 5 6 7***
Capacity for emotional investment in relationships: *1 = tends to focus primarily on his/her own needs in relationships; to have unstable, tumultuous relationships; or to have few if any relationships; 3 = relationships tend to be shallow, lacking in depth, or based primarily on mutual participation in shared activity or mutual selfinterest;5 = demonstrates conventional sentiments of friendship, caring, love, and empathy in relationships; 7 =tends to have deep, committed relationships characterized by mutual sharing, emotional intimacy, interdependence, respect, and appreciation.* ***1 2 3 4 5 6 7***

Emotional investment in values and moral standards: *1 = evidences a relative absence of moral values andconcerns for the needs of others; may behave in selfish, inconsiderate, self-indulgent, or aggressive ways with little sense of remorse or guilt; 3 = shows signs of some internalization of standards (e.g., avoids doing "bad" things because knows others will think badly of him/her; thinks in relatively simple or childlike ways about right and wrong") but lacks mature feelings of guilt or remorse for wrongdoing and a capacity to override own desires that regulate behavior; 5 = is invested in moral values and experiences guilt for hurting other people or failing to meet moral standards; has conventional moral views; 7 = thinks about moral questions in a way that combines abstract thought, a willingness to challenge or question convention, and genuine compassion and thoughtfulness in actions. Note: Where the person is morally harsh and rigid toward self or others, code "4."* ***1 2 3 4 5 6 7***
Understanding of social causality (ability to understand why people do what they do): *1 = explanations of people's behavior or narrative accounts of interpersonal experiences tend to be confused, confusing, distorted, extremely sparse, or difficult to follow; "stories" of events tend to lack coherence; 3 = explanations of people's behavior or narrative accounts of interpersonal events tend to be slightly confusing; descriptions of interpersonal events often have incongruities that require "work" to understand fully; 5 = tends to provide straight forward narrative accounts of interpersonal events in which people's actions result from the way they experience or interpret situations; 7 = tends to provide rich, coherent, and accurate accounts of interpersonal events. Note: where the person tends to describe interpersonal events as if they "just happen," with little sense of why people behave the way they do (i.e., alogical rather than illogical narratives, which seem to lack any causal understanding), rate "2."* ***1 2 3 4 5 6 7***
Experience and management of aggressive impulses: *1 = is physically assaultive, destructive, sadistic, or in poor control of aggressive impulses; 3 = tends to be angry, passive-aggressive, denigrating of others, physically abusive to self, or unable to protect self from escapable abuse; 5 = avoids dealing with anger by denying it, defending against it, or avoiding confrontations; 7 = can express anger and aggression and assert him/herself appropriately.* ***1 2 3 4 5 6 7***
Self-esteem: *1 = views self as loathsome, evil, rotten, contaminating, or globally bad; 3 = has low self-esteem(e.g., feels inadequate, inferior, self-critical, etc.); 5 = displays a range of positive and negative feelings toward theself; 7 = tends to have realistically positive feelings about him/herself. Note: where person is grandiose, or alternates between overvaluation and devaluation of self, rate "4."* ***1 2 3 4 5 6 7***

Identity and coherence of self: *1 = has multiple personalities; 3 = views of, or feelings about, the self fluctuate widely or unpredictably; lacks stable goals, ambitions, or core values; has an unstable sense of self; feels as if s/he "doesn't know who s/he is"; 5 = identity and self-definition are not a major concern or preoccupation; 7 = feels like an integrated person, with stable commitments to long-term ambitions, goals, values, and relationships.*

1 2 3 4 5 6 7

Appendix G

Patient Health Questionnaire (PHQ-15)

Please answer every question to the best of your ability unless you are requested to skip over a question.

During the last **4 WEEKS,** how much have you been bothered by any of the following problems?

Please check [√]	Not bothered	Bothered a little	Bothered a lot
a. Stomach pain			
b. Back pain			
c. Pain in your arms, legs, or joints (knees, hips, etc.)			
d. Cramps			
e. Pain or problems during sexual intercourse			
f. Headaches			
g. Chest pain			
h. Dizziness			
i. Fainting spells			
j. Feeling your heart pound or race			
k. Shortness of breath			
l. Constipation, loose bowels, or diarrhea			
m. Nausea, gas, or indigestion			
n. Trouble falling asleep or staying asleep, or sleeping too much			
o. Feeling tired or having little energy			

Appendix H

Doctor's Rating of Patient's Health

Please rate how healthy your patient is overall with 0 being extremely unhealthy and 100 being extremely healthy.

0------10-----20------30------40------50------60------70------80------90------100

Appendix I

Patient's Rating of Their Health

In general, would you say your health is: [√]				
Excellent	**Very Good**	**Good**	**Fair**	**Poor**

Appendix J

Information Sheet for Patients

Title of Study: Attachment, Health, and the Doctor-Patient Relationship

Principal Investigator (PI): John H. Porcerelli, PhD, WSU Family Medicine Center

Purpose: You are being asked to be in a research study about doctor-patient relationships because you are an adult patient (age 18 or older) at the WSU Family Medicine Center (FMC). This study is being conducted only at the FMC. The estimated number of study participants to be enrolled at the FMC is about 100 patients and 25 physicians. **Please read this form and ask any questions you may have before agreeing to be in the study.**In this research study, FMC patients will complete questionnaires about their 1) relationships 2) moods, 3) overall physical health, and 4) your satisfaction with the care you have received from providers. Physicians will also provide ratings about today's visit and your overall health.

Study Procedures: You agree to take part in this research study, you will be asked to spend about 15 to 20 minutes of your time today before seeing your physician to complete a 75-item questionnaire. Please answer all questions. Your identity will be protected by not including any identifying information on these forms.

Benefits: As a participant in this research study, will be no direct benefit for you; however, information from this study may benefit other people in the future.

Risks: If you are taking part in this study, you may experience the following risks: Patients may feel distressed when answering questions about their relationships and their moods. However, if this occurs please tell your physician during your visit. There may also be risks involved from taking part in this study that are not known to researchers at this time.

Costs: Your participation in this study will be of no cost to you.

Compensation: For taking part in this research study, you will receive an honorarium – a $10 Target gift card.

Confidentiality: All information collected about you during the course of this study will be kept confidential to the extent permitted by law. You will be identified in the research records by a code letter or number.

Voluntary Participation /Withdrawal: Taking part in this study is voluntary. You have the right to choose not to take part in this study. If you decide to take part in the study you can later change your mind and withdraw from the study. You are free to only answer questions that you want to answer. You are free to withdraw from participation in this study at any time. Your decisions will not change any present or future relationship with Wayne State University or its affiliates, or other services you are entitled to receive. The PI may stop your participation in this study without your consent. The PI will make the decision and let you know if it is not possible for you to continue. The decision that is

made is to protect your health and safety, or because you did not follow the instructions to take part in the study.

Questions: If you have any questions about this study now or in the future, you may contact Dr. Porcerelli at (248) 453-0169. If you have questions or concerns about your rights as a research participant, the Chair of the Institutional Review Board can be contacted at (313) 577-1628. If you are unable to contact the research staff, or if you want to talk to someone other than the research staff, you may also call (313) 577-1628 to ask questions or voice concerns or complaints.

Participation: By completing the questionnaire you are agreeing to participate in this study.

Appendix K

Information Sheet for Physicians

Title of Study: Attachment, Health, and the Doctor-Patient Relationship

Principal Investigator (PI): John H. Porcerelli, PhD, WSU Family Medicine Center

Purpose: You are being asked to be in a research study of the doctor-patient relationship because you are physician at the WSU Family Medicine Center. This study is being conducted here at FMC. The estimated number of study participants to be enrolled is approximately 100 patients and 25 physicians. **Please read this form and ask any questions you may have before agreeing to be in the study.** In this research study, patients of the physicians at the FMC will complete questionnaires about their relationships and moods as well as rate their satisfaction with their physician. After seeing the patient, the physicians will then be asked to rate their relationship with the patient on a 10-item scale and provide an estimate of the patient's overall health on a visual analog scale ranging from 1-100. You will also be asked to indicate your profession status (faculty or PGY year).

Study Procedures:If you agree to take part in this research study, you will be asked to spend about two minutes of your time after each visit with patients who also volunteer for the study. You will be asked to provide these responses for no more than 15 patients over the next 6 months.Your identity will be protected by using a number or letter code system instead of your name.

Benefits: As a participant in this research study, there will be no direct benefit for you; however, information from this study may benefit other people in the future.

Risks: There are no known risks at this time to participation in this study.

Costs: Participation in this study will be of no cost to you.

Compensation: You will not be paid for taking part in this study.

Confidentiality: All information collected about you during the course of this study will be kept confidential to the extent permitted by law. You will be identified in the research records by a number or letter code. The sheet containing your code number and name will be destroyed once all participants have been recruited.

Voluntary Participation /Withdrawal: Taking part in this study is voluntary. You have the right to choose not to take part in this study. If you decide to take part in the study you can later change your mind and withdraw from the study. You are free to only answer questions that you want to answer. You are free to withdraw from participation in this study at any time. Your decisions will not change any present or future relationship with Wayne State University or its affiliates. The PI may stop your participation in this study without your consent. The PI will make the decision and let you know if it is not

possible for you to continue. The decision that is made is to protect your health and safety, or because you did not follow the instructions to take part in the study

Questions: If you have any questions about this study now or in the future, you may contact Laura Richardson, M.A. or Dr. Porcerelli at the following phone number (248) 453-0169. If you have questions or concerns about your rights as a research participant, the Chair of the Institutional Review Board can be contacted at (313) 577-1628. If you are unable to contact the research staff, or if you want to talk to someone other than the research staff, you may also call (313) 577-1628 to ask questions or voice concerns or complaints.

Participation: By completing the questionnaire you are agreeing to participate in this study.

Abstract

Attachment and Interpersonal Relatedness as Models Predicting Somatization, Physical Health and Utilization in Primary Care

By

Laura A. Richardson

May 2015

Advisor: V. Barry Dauphin, Ph.D.

Major: Psychology (Clinical)

Degree: Doctor of Philosophy

The present study examined the degree to which the self and other models of attachment and object relations can predict somatization, overall physical health and healthcare utilization in a primary care sample of men and women. Attachment and Object Relations theories provide valuable information regarding how one understands and communicates their symptoms, their mentalizing capacities, and how they experience relationships. There is a growing interest in merging primary care and mental health services to address patients' psychosocial stressors, indicating the correlations between physical and psychological health-related concerns. One hypothesis states that attachment and object relations independently predict somatization, physical health, and healthcare utilization and that object relations and attachment may together better predict the degree of somatization, physical health, and healthcare utilization experienced among participants than either model alone. Participants (N=102) at a primary care clinic completed the Experiences In Close Relationships questionnaire-Short Form (ECR-S), the Relationship Questionnaire (RQ), Early Memory Narratives, Patient Health Questionnaire-15 (PHQ-15), Brief Symptom Inventory-7 (BSI-7), rating of physical health (Doctor's

also provided a rating) and total ER visits, overnight stays, and Doctor's visits. Early memories were rated using the Social Cognition and Object Relations Scale- Global rating method (SCORS-G). Results indicated that a factor analysis of the SCORS-G produced two factors: cognitive and affective. These factors were used in a series of step-wise regressions which showed that together the affective factor and two attachment concepts, the anxiety dimension and preoccupied attachment style, predicted somatization. Independently, the affective factor also significantly predicted overnight hospital stays, somatization, self-reported physical health, and Doctor's rated health of patients'. The fearful attachment style predicted self-reported physical health and somatic symptoms and the preoccupied attachment style predicted somatic symptoms.. Using a multi-method approach of both clinician ratings (SCORS-G), participant-rated measures (ECR-S, RQ, PHQ-15, BSI-7), and doctor's ratings of the patient, provides further understanding of how object relations and attachment style can be useful within a primary care setting.

Keywords: Attachment, Object Relations, Early Memories, SCORS-G, ECR-S, Somatization, Healthcare Utilization, Patient physical health, Primary Care

Autobiographical Statement

Laura Richardson completed her undergraduate degree in Psychology at Michigan State University in 2007. She completed her Master's degree in Clinical Psychology at the University of Detroit Mercy and is expected to graduate with her Ph.D. in Clinical Psychology from the University of Detroit Mercy in the Summer of 2015. She is currently completing her APA-Accredited Internship in the Department of Psychiatry at Louisiana State University Health Sciences Center/Medical School in New Orleans, Louisiana. She has been accepted to the Massachusetts General Hospital/Harvard Medical School Postdoctoral Fellowship in Psychological Assessment and Clinical Psychology.

She has given a poster presentation on the Convergent Validity of the Adelphi Early Memory Index using a Primary Care sample[1] and has recently given a presentation as a part of a symposium at the Society for Personality Assessment annual convention in March 2015 titled: *Generating clinical insights using the SCORS-G global and individual scales*[2]**.** She plans on submitting a paper focusing on the Clinical Utility of the SCORS-G in a primary care setting as it relates to healthcare utilization and somatization. She also hopes to continue integrating the theory of attachment into her clinical and research pursuits.

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[1] Richardson, L., Jasinski, M., Murdoch, W., Morris, P., and Porcerelli, J. Convergent Validity of the Adelphi Early Memory Index: A Primary Care Study. Presented poster at the Annual Convention of the Society for Personality Assessment (SPA), Arlington, VA, March 2014.

[2] Richardson, L., Porcerelli, J.H., Dauphin, V.B., Morris, P., Murdoch, W. Attachment and Interpersonal Relatedness as Models Predicting Somatization, Healthcare Utilization, and Physical Health in Primary Care. Presented at the Annual Convention of the Society for Personality Assessment (SPA), Brooklyn, NY March 2015.