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Psychophathology and Interpersonal Relationships: Clinical vs. Normative (Non-Patient) Samples

Guy Edlis
University of Tennessee - Knoxville

To the Graduate Council:

I am submitting herewith a dissertation written by Guy Edlis entitled "Psychophathology and Interpersonal Relationships: Clinical vs. Normative (Non-Patient) Samples." I have examined the final electronic copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy, with a major in Psychology.

Leonard Handler, Major Professor

We have read this dissertation and recommend its acceptance:

John W. Lounsbury, Richard A. Saudargas, Heather A. Hirschfeld

Accepted for the Council:
Dixie L. Thompson

Vice Provost and Dean of the Graduate School

(Original signatures are on file with official student records.)

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Carolyn Hodges

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Psychopathology and Interpersonal Relationships: Clinical vs. Normative (Non-Patient) Samples

A Dissertation Presented for the
Doctor of Philosophy Degree
The University of Tennessee, Knoxville

Guy Edlis
August 2008

DEDICATION

I would like to dedicate this dissertation to several people, who their constant emotional nurturance and intellectual challenge has enabled me to develop an authentic passion, commitment, and sense of ethic for the way I live and play my life.

Meiravi, who has been there all through the process. Your mere presence, intelligence, and love have made me a better person altogether.

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And last but not least, I would like to dedicate this work to the patients that I have been seeing in the past few years. Individuals who have given me the opportunity to ‘escort’ them along their personal journey for emotional healing and ‘self-creation’, trusted me to know them in ways no other knows them, and helped me experientially learn how to be a better psychologist and a person.

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ABSTRACT

The centrality of interpersonal relationships in both adaptive functioning and psychopathology is unmistaken. Across the lifespan, individuals are born into, develop within, and manifest their behaviors within a relational context. Within the clinical context, relationships in general and relational problems in particular are often key in defining and describing psychopathology and its etiology. Theory and research regarding the relationship between psychopathology and interpersonal functioning have yielded diverse conceptualizations and multitude of empirical findings, all indicative that psychopathology and interpersonal difficulties are inseparable.

The current study represents an added step in the empirical and conceptual process of clarifying the multi-layered relationship between interpersonal functioning and psychopathology. Utilizing a multi-method and multi-level methodological approach, it was investigated whether individuals who seek psychotherapy experience different quantity and quality of interpersonal problems, compared with non-patients. The current study also investigated in what ways patients' unconscious representations of self and others (internalized object relations) differ in quality from non-patients.

A clinical group of forty individuals who seek outpatient psychotherapy were compared to a non-patient group. Both groups were administered the SCL-90-R, IIP-32, Rorschach Inkblot Test, and the Mutuality of Autonomy Scale. The groups were compared across domains of psychopathology, interpersonal problems, and quality of object-relations functioning.

The clinical group showed significantly higher levels of psychological distress and vulnerability to psychopathology than the non-patient group. Similarly, the clinical group showed greater magnitude of interpersonal problems, originating from excessive dependency and a significant sense of lacking agency in their relationships. Significant deficits in object-relations functioning were found in the clinical group when compared to the non-patient group. The clinical group tended to experience greater interpersonal preoccupation, maladaptive interpersonal behaviors, an increased likelihood to expect and act aggressively in relationships, and greater vulnerability for impaired and inaccurate understanding of others and their needs. Furthermore, the clinical group's overall degree of deficits in self-object differentiation and impairments in the capacity for mutual and empathic object-relatedness were significantly higher in comparison to non-patients.

Conceptual and clinical meanings of the findings are discussed, along with their external validity in light of the current study's methodological and statistical limitations.

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LITERATURE REVIEW

Relatedness, Personality Development, and Interpersonal Relationships

"The psychology and psychopathology of emotion is found to be in large part the psychology and psychopathology of affectional bonds" (Bowlby, 1980, p.40). As captured through Bowlby's seminal work and further substantiated by classical and contemporary theoretical paradigms and empirical findings, it has been theorized that relationships constitute a core element in human development and functioning (Adler, 1927; Aron, 1996; Bakan, 1966; Batson, 1990; Baumeister & Leary, 1998; Berscheid, 1999; Blatt & Blass, 1990, 1996; Bowlby, 1969; Buber, 1923, 1936; Deci, 1995; Fairbairn, 1952; Greenberg & Mitchell, 1983; Guisinger & Blatt, 1994; Horney; 1939, 1945; Mahler, Pine, & Bergman, 1975; McAdams, 1985, 1989; Rogers, 1951; Stern, 1985; Sullivan, 1953).

Indeed, individuals are embedded in relationships throughout their lives, which have both a figural and background effect on other psychological processes, adaptive (Argyle, 1987; Myers, 1999; Reis, Collins, & Berscheid, 2000) and psychopathological in nature (Benjamin, 1996; Blatt, 1990, 2004; Blatt & Schicman, 1983; Dozier, Stoval, & Albus, 1999; Fonagy, Target, & Gergely, 2006; Greenberg, 1999; Helgeson, 1994; Horowitz, 2003; Joiner & Coyne, 1999; Leary, 1957; Robinson & Garber, 1995; Sroufe, Egeland, Carlson, & Collins, 2005; Thomson, Flood, & Goodvin, 2006). Such embeddedness reflects a conceptualization of development as a contextualized process,

where individuals are continuously ‘nested’ within various levels of relationships (Bronfenbrenner, 1977).

Interpersonal relationships consist of interactional patterns with specific partners that are known to each other (e.g., parents, peers, spouse), which are carried out over time and involve some degree of affective, cognitive, and behavioral investment by participants (Berscheid, 1999; Hinde, 1979; Perlman & Vangelisti, 2006). Relationship problems reflect a continuum of interpersonal attitudes and behaviors, among which one can find difficulties and failures in forming relationships, maladaptive social behavior, frequent interpersonal conflicts, social anxiety, social isolation and withdrawal.

The formation, maintenance, and vicissitudes of relatedness have been discussed extensively in both classical and contemporary conceptualizations of developmental processes in general and personality development in particular. These conceptualizations pertain to both pathways for adaptive (Baumeister & Leary, 1995; Bornstein & Languirand, 2003; Ryff, 1995) and maladaptive (Bornstein, 2005) psychological and interpersonal functioning.

Different developmental theories often reflect different notions in regard to the development of personality and the role of relatedness and attachment in such process. Nevertheless, several communalities can be identified in most developmental theories. First, a common underlying assumption in most developmental theories is that personality development reflects a lifelong process, in which the individual is constantly negotiating multiple motives at various levels. A second common thread is that although different constructs and terms are employed, there is a wide consensus that the process of psychological development occurs within a context, through the interaction of the

individual with significant others. And last, most developmental theories give emphasis to at least one of two primary developmental themes, agentic and affiliate themes. Most theories reflect an interaction between the two themes, aimed at gradual integration.

Both the capacity to establish mature relationships and a differentiated, coherent, and complex sense of identity and agency are common themes within psychoanalytic and cognitive theories. Psychoanalytic theories offer abundant examples of such a distinction and its relevance in personality development (Fonagy, Target, & Gergely, 2006). Freud's classical notion of "L*ieben and Arbeiten"* reflects his belief that love and work are the cornerstones of humanness, or, in other words, that the fundamental intrapsychic conflict between instinct and civilization reflects the basic tension between one's need for agency on the one hand and for belonging to a greater entity on the other hand.

Reflecting a more object-relational perspective, Winnicott (1965) described the fundamental human needs for both symbiosis with the other and solitude, often with the presence of the other. Similarly, Balint (1968) extended and termed such opposing motives as being a part of a general need for 'object relatedness', while differentiating between *Ocnophilic and Philobatic*. The Ocnophilic clings to the object and reacts with anxiety when separation is impending, while the Philobatic is detached and takes a self-sufficient defensive posture, aimed at protecting herself/himself against the anxiety of separation. Based on Balint's conceptualization, Shor & Sanville (1978) view personality development as a dynamic oscillation between *necessary connectedness* and *inevitable separations*.

Alfred Adler (1951) discussed the ongoing conflict between "*social interest*" and "*self-perfection*", and viewed psychopathology as a distortion in the direction of self-

perfection, at the expense of sociality. Greenberg (1991) described aggression and libido, using the terms *Effectance* and *Security*, the former being the drive for agency, and the latter being the drive for relatedness. He further suggested that tension between these two motives reflects the core of an intrapsychic conflict. Mahler's et al. (1975) Separation-Individuation theory and Bowlby's (1969, 1973, 1980) attachment theory also emphasize the primacy of the need for security gained by the presence of the object, before one can start exploring the world and experience his or her need for separateness, autonomy, and individuality. Both Mahler and Bowlby emphasize the need for symbiotic union with the caretaker in parallel with a natural tendency for individuation through exploration.

Other, non-psychoanalytic perspectives also emphasize such dialectical tension between these two motives. For example, Angyal (1951) and Bakan (1966) defined *Communion* and *Agency* as two fundamental dimensions of personality, the former being a merger with the other, while the latter being a move toward individuation. McAdams (1980, 1985) defines *Power* and *Intimacy* as core issues in personality organization and personal narrative construction. Beck (1983) used the terms of *Sociotropy* and *Autonomy* in a similar manner to that of the various psychoanalytic terms, viewing them as 'two sides of the same coin'. Horowitz (2003), who represents a more interpersonal approach, termed these two motives as *Dominance* and *Communion*, while emphasizing their complementary relationship.

All of these theories and their corresponding perspectives upon human nature and personality development emphasize a fundamental and prominent human need for, and motivation to, relate to others and form a degree of meaningful sense of dependency. Moreover, such capacity for flexible, context-appropriate relatedness is vital for adaptive

functioning, and is often termed *mature dependency* (Baumeister & Leary, 1995), *Interdependence* (Cross, Bacon, & Morris, 2000; Cross & Madson, 1997), *Connectedness* (Rude & Burnham, 1995), *Relatedness* (Blatt, 1990), and *Healthy Dependency* (Bornstein & Languirand, 2003). Such developmental achievement is often associated with a developmental history where the individual has been exposed to authoritative parenting that balances emotional warmness, availability, and attunement with clear interpersonal boundaries. Such balance often probabilistically fosters a sense of self-confidence and identity, coupled with trust in others and a capacity to ask for help and support without experiencing guilt, shame, or weakness (Bornstein, 2005; Kobayashi, 1989; Lee & Robins, 1995; Tait, 1997).

Interpersonal Relationships and Psychopathology

Relationships have a prominent place within the clinical context, both in many patients' symptomatic presentations, and very often as part of the underlying etiologies of their emotional distress and functional difficulties. This is true for both descriptive diagnostic systems of psychopathology such as the Diagnostic and Statistical Manual (DSM; APA, 2000), as well as for more explanatory and structural diagnostic systems such as the Psychoanalytic Diagnostic Manual (PDM; APO, 2006). In fact, even a brief review of the diagnoses in the current version of the Diagnostic and Statistical Manual (DSM-IV-TR; APA, 2000) reveals that most contain a criterion that reflects difficulties, deficits, or maladaptive interpersonal relationships.

Horowitz & Vitkus (1986) defined a *symptom* as a "complex subjective experience that consists of a network of interrelated cognitive, affective, and interpersonal elements" (p.444). And indeed, one of the most frequent complaints patients report initially in treatment is a disruption in and distress regarding their interpersonal relationships and functioning (Horowitz, 1979, 2004; Horowitz, Rosenberg, Baer, Ureno, & Villasenor, 1988; Horowitz & Vitkus, 1986; Maling, Gurtman, & Howard, 1995; Segrin, 2001; Waldinger, Seidman, Gerber, Liem, Allen, & Hauser, 2003). Furthermore, it is no surprise that quality and nature of interpersonal relationships are frequently viewed by clinicians as indicators of psychopathology (Burman & Margolin, 1992; Luborsky & Crits-Cristoph, 1990; Millon, 2004; Sheffield, Carey, Patenaude, & Lambert, 1995).

The centrality of relational themes in the clinical process is unmistakable. From the presenting problems during the initial intake through the psychotherapy process itself and culminating with the separation associated with terminating therapy, patients express their embeddedness in relationships through discussing, enacting, and acting-out their relational disappointments, disruptions, conflicts, infatuations, passions, and sexual fantasies. In doing so, they reflect an amalgam of their distant infantile past, current present, and the future they hope for in regard to their intrapsychic and interpersonal functioning. In other words, relationships have a fundamental role in what frequently evokes the need to seek psychotherapy, explore and work through problems in psychotherapy, and serve as a major 'testing ground' for the effects of psychotherapy. In addition, the therapeutic relationship itself, being the patient's capacity to maintain the

real relationship, form a working alliance, and experience the transferential relationship, constitutes a major experiential arena for and 'vehicle' to the therapeutic change process.

Across different theoretical orientations, clinicians have become greatly sensitive to patients' quality of interpersonal functioning, most often viewing it as a crucial marker of one's general psychological functioning. On the one hand, a patient's interpersonal functioning is often viewed as a major etiological cause for emotional distress and psychopathology. On the other hand, a patient's interpersonal functioning is often being highly affected by her/his emotional distress and psychopathology. Such increased clinical sensitivity to interpersonal functioning is reflective of the general transition psychology as a discipline has been going through, a movement toward greater incorporation of relationships as an explanatory and predictive aspect of human functioning. Such transition has been coined by Berscheid (1999) as the "greening of relationship science" (p. 260), and is also manifested in the gradual evolution of clinical disciplines from across the theoretical 'divide' toward a more relational-based theorizing of the etiology (Allen, 2001; Beebe & Lachman, 2002; Greenberg & Mitchell, 1983; Stern, 1985), assessment (Finn, 1996; Finn & Tonsager, 1997; Handler, 2007), diagnosis (Benjamin, 1996; Horowitz, 2003; McWilliams, 1998), case formulation (Henry, 1997; Levenson & Strupp, 1997; Luborsky, 1997; Markowitz & Swartz, 1997) and psychotherapy (Aron, 1996; Bollas, 1987; Mitchell, 1988, 1993, 1997, 2000; Puschner, Kraft, & Bauer, 2004; Safran & Muran, 2000; Safran & Segal, 1990; Stolorow, Brandschaft, & Atwood, 1987; Atwood & Stolorow, 1984).

Across all of the above mentioned domains of psychology, such transition reflects a substantial emphasis on relational themes as a paramount dimension in the description,

exploration, understanding, and modification of psychopathology through the therapeutic change process. In other words, it is impossible to fully understand the etiology, course, and effects of psychopathology without taking into account the interpersonal domain of functioning. In doing so, both the ways patients experience their interpersonal relationships and patients' object-relational functioning need to be assessed. This is what the current study seeks to explore.

Theory and empirical research regarding the relationship between psychopathology and interpersonal functioning have yielded diverse explanatory and predictive conceptualizations, along with multitude of empirical findings (Berscheid & Reis, 1998; Horowitz, 2004; Kiesler, 1996; Myers, 1999; Puschner, Kraft, & Bauer, 2004; Reis, Collins, & Berscheid, 2000; Ryff, 1995; Segrin, 2001; Sroufe, Duggal, Weinfield, & Carlson, 2000; Van Orden, Wingate, Gordon, & Joiner, 2005). Across the theoretical 'divide' and gamut of empirical findings, several fundamental themes can be identified, all emphasizing that psychopathology and interpersonal difficulties are inseparable (Segrin, 2001; Sroufe, Duggal, Weinfield, & Carlson, 2000; Van Orden, Wingate, Gordon, & Joiner, 2005).

One aspect is the social behavior of the individual who suffers from emotional distress or psychological disorder, frequently shaping the nature of interpersonal relationships through both verbal and non-verbal communication that often reflects one's inner psychological state. A second aspect is others' reactions and responses to the individual who suffers from a psychological disorder, both to the core symptomatology of the disorder and the accompanying disruptions in interpersonal and communicative behavior. A third aspect focuses on the internalized object-relational and representational

patterns of relating to others, which reflect both past and present relational experiences. The quality and nature of these internalized experiences and formed patterns with significant others often serve as a precursor to people's current or future psychological distress and disorders. In other words, past and present relational difficulties or trauma most often contribute to the development and course of psychopathology.

Empirically, four aspects of this relationship between psychopathology and interpersonal relationships have been investigated (Segrin, 2001; Sroufe, Duggal, Weinfield, & Carlson, 2000; Van Orden, Wingate, Gordon, & Joiner, 2005):

(1) *Family-of-origin experiences* is a highly consensual theme in psychology today in regard to its powerful role in creating and/or maintaining psychological problems. Such developmental perspective reflects the assumption that early childhood experiences, especially when 'toxic', set the stage for later adult functioning. In essence, this is a diathesis-stress model, which emphasizes the interplay between having psychological vulnerability and exposure to environmental stressors that cause an outbreak of psychopathology. Nevertheless, from psychoanalysis, through attachment theory, to a developmental psychopathology perspective, such a relationship has not yet been established as causative or deterministic, and is most often probabilistic (Gottlieb & Willoughby, 2006). Nevertheless, there is an abundance of empirical data to support such a probabilistic link (e.g. Kim-Cohen, Caspi, Moffitt, Harrington, & Milne, 2003; Sroufe, Egeland, Carlson, & Collins, 2005; Sroufe, Duggal, Weinfield, & Carlson, 2000). Examples are the case of parental neglect and physical and/or sexual abuse, which often serve as precursors to multitude of mental health problems, such as substance-abuse,

depression, personality disorders, eating disorders, and others (Bradley, Jenei, & Westen, 2005; Kobak, Cassidy, Lyons-Ruth, & Ziv, 2006; Polusny & Follette, 1995).

(2) *Family-of-orientation experiences* reflect the second aspect of this relationship that has been empirically studied. Most individuals detach at a certain point of their life from their family of origin, and construct their own nuclear family. The new family becomes a major source into which the individual puts significant energy and involvement, and thus it has a considerable effect on one's psychological well-being. Also, one's psychological well-being or illness has an enormous impact on the family dynamics and its members. Across the literature, there has been an extensive line of research investigating this aspect, mostly through investigation of the relationship between psychopathology and marital distress (Anderson, Beach, & Kaslow, 1999; Cowan & Cowan, 2006; Coyne, Downey, Boergers, 1992). Simply put, each can trigger the other, or in other words, marital distress can serve as a strong stressor, thus evoking symptoms of psychopathology. At the same time, the existence of mental illness (e.g., depression) in one member of the couple can cause a significant deterioration in marital quality. Beyond the spousal system, another aspect of the relationship is the parental system, where either a child or a parent who suffers from emotional distress or mental disorder will most probably cause deterioration in the quality of the parenting, exacerbation in symptoms, and decreased marital satisfaction (Cummings & Davies, 1999; Owen, Thompson, & Kaslow, 2006). As such, it is not an individual problem, but a systems problem.

(3) *General personal relationships* represent the third cluster of empirical findings in regard to the interplay between interpersonal relationships and psychopathology.

Whether married or not, individuals seek and establish other relationships, including friendships with peers, colleagues, and others. An extensive line of research into the role of social support in the etiology and maintenance of psychopathology (Coyne & Downey, 1991; Jones & Moore, 1990; Thompson, Flood, & Goodvin, 2006; Vaux, 1988) indicates that both psychopathology and emotional distress can have an effect on and be affected by personal relationships. When these relationships are unavailable or characterized by conflict and discord, loneliness, depression, anxiety and other psychological problems often become evident. Alternatively, when an individual suffers from psychopathology, these relationships are often negatively impacted. Excessive and hostile conflicts, interpersonal rejection (Coyne, 1976a, 1976b), and sometimes a total lack of available personal relationships with the accompanying experience of loneliness and alienation, can all further evoke, maintain, prolong, and exacerbate psychopathology. In turn, such exacerbation can cause further deterioration in the quality of these interpersonal relationships;

(4) *Interpersonal communication* constitutes the fourth cluster of empirical findings in regard to the relationship between psychopathology and interpersonal relationships. Essentially, this cluster assumes that one of the core components of a successful relationship is the ability to communicate continually and effectively. One can even assert that the quality of a relationship and the quality of the communication in it are impossible to separate.

There is an extensive and wide-range empirical literature on psychopathology regarding deficits and maladaptive use of social skills (Edison, & Adams, 1992; Gilbert & Connolly, 1991; Halford & Hayes, 1995; Lewinsohn, Mischel, Chaplin, & Barton,

1980; Mundy & Sigman, 2006; Peterson, 1991; Philippot, Feldman, & Coats, 2003). This literature emphasizes the role of poor social skills in the development, maintenance, and even the outcome of depression, social anxiety, schizophrenia, eating disorders, substance abuse, and other types of psychopathology. As such, psychopathology in itself has a tremendous effect on the quantity and quality of one's interpersonal communication, nature of relationships, and satisfaction derived from them. At the same time, adaptive social skills often have a potential protective effect against the development of psychopathology in the face of stressors, by enhancing one's relational quality that subsequently serve as both social support and buffer when coping with stress.

Individuals fail to develop adaptive social skills for different reasons, ranging from social isolation to poor role models, thereby affecting aspects of emotional regulation, impulse control, delay of gratification, theory of mind, and empathic capacity. On the other hand, psychopathology often has a major impairing effect on cognitive (e.g., concentration, attention), emotional (e.g., sad affect, nervousness), and motivational domains of functioning, consequently interfering with effective social behavior and skills. Other examples of ways in which psychopathology can negatively influence one's social skills, thus social adaptation, is via excessive reassurance seeking, self-doubt, guilt or shame, along with increased need for impression formation, attention seeking, indirect communication, and conflicting messages ('double bind'). It is important to mention that sometimes psychopathology is associated with well-developed social-skills that are nevertheless utilized for deception, manipulation, and exploitation of others within relationships. Examples of that are mostly abundant in certain personality disorders, such as anti-social, histrionic, narcissistic, and paranoid disorders.

Different theoretical perspectives include diversity of assumptions, explanations, and predictions in regard to the connections between psychopathology and interpersonal relationships. In an effort to portray a meta-theoretical profile of the suggested linkages, Segrin (2001) suggested a continuum model that reflects the interplay between psychopathology and relationships. Such a continuum reflects an assumption that interpersonal problems can serve as an antecedent, concomitant, or consequence for psychopathology. Nevertheless, interpersonal problems can also assume all of these roles at the same time. Such a meta-theoretical model enables both an explanatory and predictive potential in regard to the complex relationship between interpersonal problems and psychopathology, along with clinical utility to guide interventions. According to the model, interpersonal processes can serve as a causal, consequential, or maintaining factor for psychopathology. Nevertheless, it can also assume a more holistic quality, where interpersonal relationships and psychopathology are constantly operating on each other, thus their relationship is more reciprocal and circular rather than linear in nature.

Serving as a *causal factor*, the strongly held and deeply rooted assumption by many clinicians is that problems in interpersonal relationships are causally involved in disrupting mental health. Such causal theoretical assumption can be further elaborated into a proximal or distal cause, emphasizing the temporal aspect interpersonal events have when affecting psychopathology. Putting it differently, in some cases interpersonal issues appear to be the dominant and immediate antecedent to psychopathology, as is the case when someone becomes depressed immediately after a spouse dies. However, the distal assumption is as pervasive, where psychopathology can possibly erupt months and years following a relational issue. One example is childhood sexual abuse and adult

borderline personality disorder. Victims of prolonged sexual abuse will sometimes experience the profound emotional effects of the abuse only when reaching adulthood, while making an effort to establish intimate relationships or raise their own children.

Reflecting a lesser degree of causality, interpersonal issues can function as a *vulnerability factor* in the disruption of mental health. Such a developmental hypothesis reflects a diathesis-stress perspective on psychopathology (Cicchetti, 2006; Ingram & Luxton, 2005; Ingram & Price, 2001; Zuckerman, 1999), where certain interpersonal events create a dormant vulnerability, or predisposition, only later to erupt when stressful events exceed a certain threshold (Fonagy & Target, 1997; Sroufe, 1997). A social and interpersonal environment that includes parental under-involvement (neglect), parental over-involvement (lack of boundaries), poor social skills, and lack of social support, carries the potential for the development of psychopathology. Carrying vulnerability for emotional disorder, via pre-existing temperamental, biological, emotional, and cognitive predispositions, can serve as an infrastructure for psychopathology when later the individual is exposed to different types of stressors, including interpersonal in nature (e.g. loneliness, conflicts, marital discord).

Serving as a *consequential factor*, Interpersonal dysfunction is often conceptualized as a result of psychopathology. As attested to in both the clinical context and empirical literature, when individuals experience episodes of psychopathology the quality of their interpersonal relationships changes, usually in a negative way. Such an assertion is valid in a wide spectrum of emotional problems (Segrin, 2001; Horowitz, 2004). The factors underlying such a negative effect are multiple, yet can be broadly categorized into the deficits and impairments caused by the primary disruption (e.g.

cognitive and emotional deficits) in mental health and functioning, and the change in social behavior of the afflicted individual. Such change is often due to the alteration in verbal and nonverbal mediums of communication, including degree of expressiveness, clarity and coherence of discourse, predominance of specific themes (e.g. sad affect, persecutory ideas, self-derogation, suicidality), and fundamental changes in the way the individual perceives and experiences interpersonal relationships. Relationships that once were rewarding and intimate can in turn be experienced as distressing, blaming, frightening, or persecuting. Beyond the direct effect psychopathology has on the individual's quality of interpersonal relationships, another major source for such negative change is the environmental reactions to the suffering individual. One of the most common reactions to individuals with psychopathology is interpersonal rejection (Coyne, 1976a, 1976b), consequently exacerbating the experience of loneliness, alienation, and a sense of being a 'defective outsider to the human kind'.

As a *maintenance factor*, interpersonal problems are often conceptualized as maintaining psychopathology. This interpersonal maintenance hypothesis reflects the assumption that once an individual suffers from psychopathology, the deteriorated quality of interpersonal relationships may further maintain and prolong the mental health problems. Even if the initial development and outbreak of psychopathology was due to factors that are not interpersonal in nature, the quality of one's interpersonal relationships will significantly affect the course and at times even prognosis of the emotional difficulties.

Last, a less positivistic, linear perspective is reflected through the family systems theory. From a holistic perspective, cause and effect are inseparable. In other words,

psychopathology and quality of interpersonal relationships simultaneously act upon and being acted upon one another. The cause for the psychopathology is also what maintains it, through interdependence and mutual influence.

Assessing Interpersonal Relationships and Functioning in Psychopathology

Relational measures are designed to assess the patterns of behaviors, thoughts, feelings, motives, patterns, and attitudes that characterize the ways in which an individual relates to others, either overtly via interactions or covertly via internalized and unconscious mental representations, wishes, and fantasies (Gurtman, 2004). These measures provide a 'window' into an individual's interpersonal functioning and underlying intrapsychic representational and object-relational world (Fishler, Sperling, & Carr, 1990; Lerner, 2006; Stricker & Gooen-Piels, 2004; Westen, 1991).

Of the various self-report, observational, archival, performance-based, and projective measures that exist for tapping interpersonal processes, several have been specifically designed to measure maladaptive aspects of a person's interpersonal and object-relational functioning. Most of these have been developed within the clinical tradition, aiming to illuminate an individual's current features of interpersonal functioning, along with occurring changes as the process of psychotherapy unfolds. In the past 20 years there has been a widespread development of measures that tap both conscious (reported) and unconscious (representational) constructs. Some examples are maladaptive transactional cycles (Kiesler, 1996), anxious or avoidant attachment styles and states of mind (Brennan, Clark, & Shaver, 1998; George, Kaplan, & Main, 1984/1985/1996; George & West, 2004), negative interpersonal representations (Blatt,

Auerbach, & Levy, 1997) and schemas (Safran, 1990), difficulties in affiliation and autonomy (Benjamin, 1996), core conflictual relationship themes (Luborsky & Crits-Cristoph, 1990), maladaptive dependency (Bornstein, 1996, 2004; Bornstein & Masling, 2006), quality of object-relations as reflected through narratives (Westen, 1991; Conklin & Westen, 2001), early memories (Fowler, 2004; Fowler, Hilsenroth, & Handler, 1995) and others.

Among these measures, the Inventory of Interpersonal Problems (IIP; Horowitz, Rosenberg, Baer, Ureno, & Villasenor, 1988), the Rorschach Inkblot Method (RIM; Rorschach, 1941/1942), and the Mutuality of Autonomy Scale (MOAS; Urist, 1977, 1980), have been frequently used in tapping interpersonal functioning and its underlying self-object representations. These three measures will be utilized in the current study. The guiding theory for these measures will be presented next, while their structure and psychometric qualities will be discussed in the methodology section. First, a review of Interpersonal Theory will be given, upon which the IIP32 self-report is based. Following that, key elements in Object-Relations Theory will be presented, along with its importance and utility in projective assessment of object-relations and interpersonal functioning, specifically via the use of the Rorschach and MOAS.

Interpersonal Theory

The Interpersonal Perspective was developed through the work of Timothy Leary (1957), Harry Stack Sullivan (1953), and Karen Horney (1945). It explores interpersonal dynamics that lead people to reenact maladaptive interpersonal patterns in an effort to

maintain emotional relatedness to an earlier attachment figure. The basic premise is an interactional definition of personality dynamics, and the basic unit of analysis is the interpersonal field. As such, the interpersonal perspective gives emphasis to the continuous development, dynamics, and change in an individual's interpersonal relationships, and views each stage across the lifespan as containing a need for new modes of relationships. Nevertheless, the interpersonal perspective assumes continuity between early relationships with caregivers to relationships with others outside the family, such as peers and romantic partners (Kiesler, 1996; Sullivan, 1953). Sullivan (1953) had three components to his conceptualization of interpersonal relationships: An emphasis on real and observable behavior as events of interpersonal behaviors, the concept of the interpersonal field or the necessity of assessing personality within an interpersonal context, and that development occurs when new modes of relatedness unfold across the lifespan.

The Circumplex Model is a comprehensive operationalization of the interpersonal field concept, thus serving to describe interpersonal dispositions and tendencies (Carson, 1969; Wiggins, 1979). The interpersonal circumplex emphasizes the concept of complementarity in interpersonal behavior, meaning that a specific interpersonal behavior evokes a particular interpersonal response. As such, problematic interpersonal behaviors and related responses form stable dysfunctional patterns in the individual, consequently shaping the basis for interpersonal problems (Kiesler, 1996). The circumplex model has been used for tapping, describing, organizing, and comparing interpersonal adjectives (e.g. Conte & Plutchnik, 1981; Wiggins, 1979), personality measures (e.g. Gurtman, 1997; Wiggins & Broughton, 1991), interpersonal transactions (e.g. Horowitz, Locke,

Morse, Waikar, Dryer, Tarnow, & Ghannam, 1991; Tracey, 1994), interpersonal problems (e.g. Horowitz et al, 1988; Gurtman, 1996), personality disorders (e.g. Pincus & Wiggins, 1990), interpersonal values (Locke, 2000), interpersonal predictors of therapeutic outcomes (e.g. Horowitz, Rosenberg, & Bartholemew, 1993), and other constructs (Plutchnik & Conte, 1997).

According to the Circumplex model, interpersonal behavior can be described along two dimensions, affiliation/communion (hostile vs. friendly) and dominance/agency (dominant vs. submissive). Such two-dimensional space can be further divided into eight octants, which allow a more particularized description of one's interpersonal behavior, where each octant describes a specific blend of agency and communion. This distinction includes the following octants: domineering, intrusive, overly nurturant, exploitable, submissive, socially avoidant, cold, and vindictive. Using the octants, interpersonal tendencies and problems can be profiled according to the two central dimensions of affiliation and dominance. (Alden et al., 1990; Gurtman, 1996). A more recent development (Gurtman, 1996) enables the use of a four-category system that divides the interpersonal circle into four quadrants, each represents a specific type of interpersonal problems: Friendly-dominant, hostile-dominant, hostile-submissive, and friendly-submissive.

Object-Relations Theory and Projective Assessment of Interpersonal Functioning

Projective assessment techniques serve as the most important form of assessment paradigm for highlighting internalized object representations, while employing a drive,

ego, object-relations, and self-psychology psychoanalytical perspectives. Nevertheless, it is the inherent developmental quality along with the centrality of both fantasized and real relationships in object relations perspective, which offer an optimal theoretical framework for integrating projective findings and highlight potential trajectories in the development of interpersonal relationships.

According to Mayman (1967), "A person's most readily accessible object representations called up under such unstructured conditions tell much about his or her inner world of objects and about the quality of relationships with these inner objects toward which he is predisposed" (p.17). Mayman (1967) adds in regard to the Rorschach test and its unique capacity to highlight internalized object relations,

> What kind of world does each person recreate in the inkblot milieu?
>
> What kind of animate and inanimate objects come most readily to mind?
>
> What manner of people and things is he prone to surround himself with?
>
> Does he put together, for example, a peopleless world of inanimate objects;
>
> if so, which objects have special valence for him? Do they hint at a certain
>
> preferred mode of acting upon the world or being acted upon by it? Are they,
>
> for example, tooth-equipped objects? Or, phalically intrusive objects?
>
> Decaying or malformed objects? (p.17; in Lerner, 2006).

Mayman reflects the centrality of internal objects in the description, explanation, and prediction of an individual's ways of 'moving within' the relational world, and how such habitual ways can be better understood via the use of projective measures, especially the Rorschach (Blatt, 1990; Lerner, 1998; 2006).

Object Relations theory is not a unified theory but a developmental and clinical perspective upon human psychological and interpersonal functioning, reflecting a core psycho-social-interactional view of the development of relationships. Object relations theory replaced the Freudian emphasis on drive and instinct (e.g., sex) gratification, with an innate motivational tendency for "object seeking". As such, the individual has the tendency to seek connectedness, or close attachments, and in turn his/her personality is shaped by these relationships. In other words, relationships are viewed by object relations theory as a prominent motive. Within relationships, the individual gradually differentiates the sense of self from the internalized others, which are representations of actual interactions with others in the world, but at the same time are modified by the individual's level of cognitive and emotional development. These representations form the base for future interactions with others, enabling a potential repertoire of modes of relating to others. Also, these representations not only influence the nature of interpersonal relationships, but are also continuously modified as a result of new relationships (e.g., psychotherapy).

A fundamental underlying assumption shared by different object relations theories concerns the distinction between external reality and the internal world. A second assumption concerns the mutual effect internalized object relations and actual relationships have between self and others. Object relations functioning centers around these intrapsychic and interpersonal processes, and has been defined somewhat differently by different theorists. One widely accepted definition of object relations was given by Greenberg & Mitchell (1983) as "the individual's interactions with external and internal (real and imagined) other people and to the relationship between their internal

and external object worlds" (pp. 13-14). Adding the internalization process to the definition (Summers, 1994; Westen, 1991), object relations are said to be the product of the individual's interactions with external (real) or internal (imagined) people, the internalized psychological residues of these interactions, and their effect on interpersonal functioning. According to this definition, the individual's mind, thoughts, and feelings about people are shaped by all early experiences with his or her caregivers, forming cognitive-affective representations of particular people, the wishes and emotions attached to these representations, and the fantasies and fears about the self and significant others. These object representations, introjects, or internal working models are crucial in mediating interpersonal functioning. Further elaboration on the nature of internalized object representations was given by Blatt & Lerner (1983): "Broadly defined, object representation refers to the conscious and unconscious mental schemata – including cognitive, affective, and experiential components – of objects encountered in reality" (p.194). Such internal 'landscape' of objects has been termed "representational world" (Sandler & Rosenblatt, 1962).

Developmentally, these mental representations are formed within a dyadic context, which is the relationship between an infant and a caregiver. These internalized mental representations serve to organize and integrate perceptions and experiences, gradually forming a complex and integrated matrix of self- and other- representations that shape affects, expectations, and subsequent interpersonal behaviors (Lerner, 1998; 2006). Such process governs and reflects the organization of the self along with the sense of self-with-others. The level of development and complexity of internalized representations can be inferred through several aspects that are often projected onto percepts on the

Rorschach and other projective measures. Among these are the degree of separation and individuation, mutuality in relatedness, and the degree to which another person is perceived as a whole person (with needs, motivations, different qualities, etc.) or a part-object present only to gratify needs (Stricker & Gooen-Piels, 2004).

In the past 20 years, more clinicians and researchers have gradually recognized the crucial role deficits in internalized object relations have in the etiology of psychopathology, especially with regard to the interpersonal aspect of symptomatology and functioning (Exner, 2003; Fishler, Sperling, & Carr, 1990; Huprich & Greenberg, 2003; Weiner, 2003). Several excellent reviews exist on the various available internalized object-relations measures (Blatt & Lerner, 1983; Huprich & Greenberg, 2003; Lerner, 1998, 2006; Stricker & Healy, 1990; Stricker & Gooen-Piels, 2004). Nevertheless, for the purpose of the current study the focus is on the category of object-relational measures that spotlight the actual and implied human contents and interactions described on projective tests. These often serve as external indicators of the internalized object-representations that organize, direct, and color one's actual interpersonal functioning. As will be further discussed in the methodology section, the current study will utilize the Rorschach Inkblot Method (RIM) and the Mutuality of Autonomy Scale (MOAS) for this purpose.

To conclude, the reviewed literature thus far points out that the centrality of interpersonal relationships in both adaptive functioning and psychopathology is unmistakable. Across the lifespan, individuals are born into, develop within, and manifest their behaviors within a relational context. Within the clinical context, relationships in general and relational problems and deficits in particular are pivotal and key in defining

and describing etiological conditions to psychopathology. Relationships very often serve as a context in the development and emergence of psychopathology, thus are frequently an etiological factor in the formation of a predisposition to psychopathology. Also, quantity and quality of relationships often serve as a marker for the existence of psychopathology and its exact nature. Within psychotherapy, the quality of relational functioning often serves as a major therapeutic goal and as one indicator for the progression and therapeutic change. Nevertheless, relationships frequently function as a protective factor against emotional distress and psychopathology, both within the personality structuring process (e.g., attachment style and emotional regulation capacity) and in the form of social support and having a buffering effect on stressors (Simpson & Tran, 2006). And indeed, the diagnostic and therapeutic emphasis given to both quantity and quality of relational functioning has dramatically increased in the past few years. A growing number of theoretical models, research measures, and empirical findings have been conceptualized and constructed to tap, quantify, explain, and predict both adaptive and maladaptive interpersonal behaviors.

Empirically, the abundance of findings indicates that interpersonal problems and psychopathology are very frequently 'knotted' together. Theoretically, a diverse array of formulations tries to conceptually account for and clarify the multi-layered nature of such intertwined relationship. The current study represents an added step in this important empirical and conceptual process, aiming to further clarify questions pertaining to interpersonal functioning in individuals who seek psychotherapy. As mentioned earlier, multiple research findings indicate that patients most often experience their emotional distress through relational manifestation (e.g., conflict or rejection), and simultaneously

their interpersonal problems have an etiological role in creating emotional distress and manifested in symptoms (Allen, 2001; Segrin, 2001; Sroufe, Dugal, Weinfield, & Carlson, 2000; Van Orden, Wingate, Gordon, & Joiner, 2005). However, the question of what are the underlying representational characteristics of individuals who experience interpersonal problems, and how such unconscious object relations functioning might be related to patients' experienced interpersonal problems is also of great clinical importance. Relating the experienced and unconscious levels is a major goal of the current study.

The current study represents a further step in exploring the relationship between interpersonal functioning and psychopathology, conceptually, methodologically, and clinically. Conceptually, the current study seeks to further clarify the question of whether individuals who seek outpatient psychotherapy experience different magnitude of interpersonal problems, compared with individuals who do not seek psychotherapy. Also, beyond the quantity of these interpersonal difficulties, do individuals who seek psychotherapy experience interpersonal problems that are qualitatively different in nature than individuals who do not seek psychotherapy. Furthermore, the current study extends this exploration by trying to clarify the intrapsychic-interpersonal interface. In other words, in what ways do patients' internalized and unconscious representations of self and other (internalized object relations) correspond to their experienced and conscious ways of relating and functioning interpersonally. Such a comprehensive approach to investigating the relationship between psychopathology and interpersonal functioning will hopefully enrich an understanding of the underlying deficits to experienced

interpersonal problems, from which patients very often suffer and present with when coming to therapy.

Methodologically, the current study focuses on an outpatient clinical sample, most of whom suffer from a mild to moderate degree of emotional disorders. It also reflects a multi-level and multi-method methodological approach, investigating interpersonal relationships and functioning through both the experienced aspect and the unconscious or representational aspect, through the use of appropriate measures to tap each level of experience and functioning. In light of the fact that a considerable portion of prior research into interpersonal functioning and psychopathology has utilized self-report measures only, combining self-report and projective measures in the current study is an important extension. Also, it has been suggested that individuals' perceptions and understanding of their personality traits and interpersonal functioning are often dissimilar to those around them (Clifton, Turheimer, & Oltmans, 2005), which implies that people's conscious understanding and what they report of their own behaviors is most probably influenced and colored by different motivations. As such, utilizing a methodological approach that taps different levels of functioning via several distinct types of measures will hopefully help to substantiate any conclusions derived by the current study.

Clinically, the current study will enable a better understanding of the unique difficulties and underlying deficits with which patients come to therapy, thus increasing clinicians' sensitivity to specific interpersonal markers of diagnostic and prognostic importance. Therapeutically, such heightened clinical awareness may factor into better planning and guiding of psychotherapy interventions, focused at modifying patients'

object relational functioning and consequently improving their interpersonal relations in the world.

Goal of Current Study

The purpose of the current study is to tap the interpersonal aspect of functioning in individuals who seek psychotherapy in an outpatient setting, often suffering from some form of emotional distress and psychopathology. The core question of the current study concerns the nature of interpersonal functioning in people who seek psychotherapy. The use of a multi-method and multi-level methodological approach will enable examination of both the conscious self-perceptions of relational functioning, along with unconscious representational aspects and object-relational patterns of relating to others.

The current study aims at answering both quantitative and qualitative questions regarding psychopathology and interpersonal functioning. *Quantitatively*, the study aims to determine whether, on the average, individuals who seek psychotherapy (clinical sample) tend to have more interpersonal problems, compared to individuals who do not seek therapy (normative, or non-patient sample). Another quantitative aspect is whether these experienced interpersonal problems emanate from communal, agentic, or both sources of maladaptive interpersonal behaviors and distress. In other words, what is the source of these interpersonal problems, when examining them through the dimensions of one's sense of agency and communion in interpersonal relationships. Beyond the question of magnitude, the *qualitative* question pertains to whether individuals who do not seek psychotherapy have qualitatively different internalized representations of

relationships, compared to individuals who seek psychotherapy. This object-relational aspect includes the dimensions of affective tone (malevolence vs. benevolence) along with the degree of differentiation and capacity for mutuality between self and other.

These research questions will be pursued through tapping both the conscious (reported) and unconscious (representational) levels of patients' experiences of their interpersonal world. Employing a multi-level and multi-method approach through the use of both self-report and projective measures will hopefully enable a more theoretically complex and clinically rich understanding of the ways in which individuals who seek psychotherapy experience relational aspects of their world. Moreover, comparing the findings from a clinical sample to a non-patient sample will allow a better understanding of whether any differences in this domain of functioning are categorical or dimensional. In other words, in regard to interpersonal functioning, the question is: Do non-patients and patients represent qualitatively different entities or just different quantitative points along one continuum. The findings will hopefully add to the ongoing debate in the literature regarding the "Continuity Controversy", pertaining to the taxonic (categorical) or dimensional (continuous) nature of psychopathology (Gunderson, Links, & Reich, 1991; Meehl, 1992; Widiger, 1997).

Research Questions and Hypotheses

The current study tests several hypotheses: Compared to a non-patient (normative) sample, individuals from the clinical sample will show, on average:

1. ***General Psychological Distress and Psychopathology*:**

   It is hypothesized that there will be:

   a. Greater general psychological distress, pooled across various domains of reported symptomatology on the SCL-90-R Global Severity Index (GSI);
   b. Greater psychological difficulties in adjustment, along with lower available coping resources, in coping with stress, affect, and interpersonal relationships as reflected by the Rorschach Coping Deficit Index (CDI);
   c. Greater negative emotional experiences and vulnerability to affective disruption, as reflected by the Rorschach Depression Index (DEPI);
   d. Greater deficits logic and coherency of thinking processes and judgment, as reflected on the Rorschach Weighted Sum of the Six Critical Special Scores (WSum6);
   e. Greater vulnerability to self-harming behaviors and suicidality, as reflected by the Rorschach Suicidal Constellation (S-CON);

2. ***Magnitude and Source of Interpersonal Problems (reported)*:**

   It is hypothesized that there will be:

   a. Greater reported general psychological distress emanating from interpersonal problems, as reflected by the IIP-32 Total Score;
   b. Greater reported psychological distress emanating from both communion and agentic aspects of interpersonal functioning as reported by the IIP-32 Communion and Agency subscales;

3. ***Quality of Internalized Object-Relations (representational level)*:**

It is hypothesized that there will be:

a. Decreased capacity to sustain interpersonal interest, involvement, and comfort when interacting with other people, as reflected by the Rorschach SumH, H:[Hd+(H)+(Hd)], ISOL, GHR:PHR, CDI variables;

b. Decreased anticipation of interpersonal intimacy and security, as reflected by the Rorschach SumT and HVI variables;;

c. Decreased capacity to balance interpersonal collaboration and acquiescence with competitiveness and assertiveness when relating to other people, as reflected by the Rorschach COP, AG, a:p, PER, and fd variables;

d. Decreased capacity to perceive people and social situations in an accurate and empathic manner, as reflected by the Rorschach Accurate (Good M) and inaccurate (Poor M) Human Movement variables;

e. Decreased complexity of object-relational representations, as reflected in decreased separation, differentiation, empathic relatedness, and mutuality in self-other representations. This dimension will be tapped through several MOAS variables of MOA-Sum, MOA-Total-L, MOA-Total-H, MOA-Mean, MOA-H, MOA-L, and MOA-Range.

CHAPTER 2

METHODOLOGY

Participants

The current study compared two groups: A clinical group, consisting of individuals who came to the University of Tennessee Psychological Clinic between January 2005 and August 2006 seeking individual psychotherapy, and a comparison, non-patient, group consisting of University of Tennessee (UT) undergraduate students, seeking credit points as part of their academic duties

Pooled together, the 80 participants were comprised of 58 females (72.5%) and 22 males (27.5%), ranging in age between 18 to 55 years, with an average age of 25.9 years. The mean educational level was 13.5 years. The clinical group was comprised of 40 individuals, 27 females (67.5%) and 13 males (32.5%), ranging in age between 18 to 55 years, with an average age of 30.7 years. The mean educational level was 13.3 years. The comparison group was comprised of 40 individuals, 31 females (77.5%) and 9 males (22.5%), ranging in age between 18 to 41 years, with an average age of 21 years. The mean educational level was 13.6 years.

A t-test for independent samples was utilized to check for significant differences between the groups in age and educational level. A statistically significant difference in the mean age was found between the groups, $t(78) = -5.25$, $p<.001$. On the average, the clinical group was found to be older (M=30.7, SD=10.05) than the comparison group (M=21, SD=5.75). There was no statistically significant difference between the group in

regard to educational level, $t(78) = .8$, $p=.43$. A non-parametric Chi-Square test was utilized to check for significant difference between the groups in frequency of gender. No statistically significant between-groups difference in the frequency of males and females was found. In other words, the percentage of men and women in the clinical and non-patient groups did not differ significantly, $\chi^2(1, N = 80) = 1.00, p = .32$.

Procedure

All the patients filled-out a socio-demographic questionnaire and the Symptom-Checklist-90-Revised (SCL-90-R) as part of the initial intake procedure. The patients' respective therapists were contacted and offered a limited psychological assessment for their patients, to inform diagnostic questions, along with aiding therapeutic planning. Patients who were included in the study were contacted by one of the experimenters and were scheduled for a single session. During the session patients were introduced to the goals and procedure of the assessment and its role as part of their therapy process. Specifically, patients were told this was done as part of an ongoing research project at the UT psychological clinic, which aims at clarifying questions regarding the nature of what difficulties patients come to therapy with and how the therapeutic process is potentially helpful. The patients were also told this is a voluntary participation, and as such they were free to decide at any point they were not interested. There would be no effect on the availability of psychological services offered to them at the clinic. They were also notified that their data would be available to their therapist for diagnosis and therapy planning, and if they wished, a separate feedback session would be given by the

examiner. All patients signed an informed consent forms agreeing to participate in the study.

The patients filled out the short version of the Inventory of Interpersonal Problems-32 (IIP-32) (Horowitz et. Al, 1988), and were administered the Rorschach Inkblot Test (RIM) according to Exner's (2001) Comprehensive System. According to the decision of the specific patient-therapist dyad, an optional feedback-session was conducted with the patient. Alternatively, all the assessment data were available to the therapist for clinical use pertaining to therapy.

The comparison sample was recruited for the study via a central online research-participation website. Each participant read and signed an informed consent for participating in the study, and was given a short verbal explanation of the goal, procedure, and credit incentive of the research. Each participant was administered a socio-demographic questionnaire, SCL-90-R, IIP-32, and the Rorschach, after which they were given an option to ask questions about the process.

The data collection phase was conducted on an individual basis by three advanced clinical psychology graduate students, all experienced in administration, scoring, and interpretation of the psychological tests used. The study was conducted through and with the approval of the UT Clinical Psychology program. Ethical standards for research with human subjects were kept in accordance with the UT Institutional Review Board (IRB).

Measures

Symptom Checklist Revised (SCL-90-R) (Derogatis & Cleary ,1977a, 1977b):

The SCL-90-R is a brief, multidimensional self-report inventory designed to screen for a broad range of psychological problems and symptoms of psychopathology. The SCL-90-R has 90 items, all scored on a 5-point rating scale. The scores are then clustered into 3 global indices (Global Severity Index, Positive Symptom Distress Index, Positive Symptom Total) and nine symptom sub-scales (Somatization, Obsessive-Compulsive, Interpersonal Sensitivity, Depression, Anxiety, Hostility, Phobic Anxiety, Paranoid Ideation, Psychoticism). The scale's internal consistency (alpha coefficients) range from .77 to .90, and test-retest (1-week apart) correlation coefficients range from .68 to .90 in a psychiatric population (Derogatis, Rickels, Rock, 1976; Horowitz, Rosenberg, Baer, Ureno, & Villasenor, 1988). Several studies demonstrated highly acceptable levels of convergent-discriminant validity. Specifically, the SCL-90-R Global Severity Index had a convergent validity of r=.92 with the Middlesex Hospital Questionnaire (Boleloucky & Horvath, 1974), along with sub-scale correlations ranging between r=.42 to .75 with MMPI constructs (Derogatis, Rickels, & Rock, 1976).

Inventory of Interpersonal Problems (IIP-32; Horowitz, 2004; Horowitz, Rosenberg, Baer, Ureno, & Villsenor, 1988):

The IIP-32 is a 32-item self-report questionnaire that identifies a person's most salient interpersonal difficulties. Although an abundance of measures exist for describing interpersonal behaviors and nature of interactions (e.g. Benjamin, 1974; 1996; Kiesler, 1983, 1991, 1996; Locke, 2000; Lorr, 1986; Wiggins, 1995), there has been a need for

both an empirical and clinically applied measure for describing diverse types of interpersonal problems. With this goal in mind and based on psychiatric outpatients' self-reported interpersonal complaints, Horowitz, Rosenberg, Baer, Ureno, & Villasenor (1988) developed the Inventory of Interpersonal Problems (IIP). The measure was later updated by Horowitz, Alden, Wiggins, & Pincus (2000), and has become a standard measure in psychotherapy research and one of the most frequently used methods to assess interpersonal problems (Puschner, Kraft, & Bauer, 2004).

The IIP has been used in diverse clinical contexts and empirical studies (Alden & Phillips, 1990; Horowitz, 2004; Horowitz et al., 1988; Pincus & Wiggins, 1990; Puschner, Kraft, & Bauer, 2004; Soldz, Budman, Demby, & Merry, 1993), and has shown considerable value in measuring change across the duration of treatment, the identification of which interpersonal problems are more or less amenable to change, the discrimination of patients with differential psychotherapy outcome, the differentiation of various types of interpersonal problems associated with different forms of psychopathology, and the successful differentiation of a normal sample from a clinical sample in terms of the amount of interpersonal distress.

The scale has an internal consistency and reliability of .93, and test-retest temporal stability of .78 after 7 days. The IIP-32 has a convergent validity of .48 with the Beck Depression Inventory (BDI-II; Beck, Steer, & Garbin, 1988), .44 with the Beck Anxiety Inventory (BAI; Beck & Steer, 1990), and .25 with the Global Severity Index (GSI) of the Symptom Checklist-9-R (SCL-90-R; Derogatis & Cleary ,1977a, 1977b).

The IIP-32 produces a general score for the magnitude of interpersonal problems, one score for psychological distress emanating from communal aspects of interpersonal

functioning, and one score for psychological distress emanating from agentic aspects of interpersonal functioning. The IIP consists of eight sub-scales: Domineering/Controlling, Vindictive/Self-Centered, Cold/Distant, Socially Inhibited, Nonassertive, Overly Accommodating, Self-Sacrificing, Intrusive/Needy. The total score is a sum of all the 32 individual item scores. The higher the score, the greater the magnitude of interpersonal problems and distress. The communal and agentic scores reflect a computational result, where a score of zero represents no distress originating from the specific aspect (either communal or agentic) of interpersonal functioning, a positive score represents distress from excessive connectedness (communion) or initiative (agency), and a negative score represents distress from a lack of connectedness (communion) or initiative (agency).

Theoretically, the development of the IIP was guided by an interpersonal perspective, specifically the work of Timothy Leary (1957), Harry Stack Sullivan (1953), and Karen Horney (1945), who all emphasized social relationships as the core of psychopathology. The IIP is based on the Circumplex model, which reflects the assumption that interpersonal behavior can be described along two dimensions, affiliation or communion (hostile vs. friendly) and dominance or agency (dominant vs. submissive). Furthermore, such two-dimensional space can be further divided into eight octants, which allow a more particularized description of one's interpersonal behavior, where each octant describes a specific blend of agency and communion. The IIP utilizes the following octants: domineering, intrusive, overly nurturant, exploitable, submissive, socially avoidant, cold, and vindictive. One's scores on these octants enable the profiling of one's interpersonal problems on the two central dimensions, affiliation and dominance. (Alden et al., 1990; Gurtman, 1996). A more recent development (Gurtman, 1996)

enables the use of a four-category system that divides the interpersonal circle into four quadrants, each represents a specific type of interpersonal problems: Friendly-dominant, hostile-dominant, hostile-submissive, and friendly-submissive.

Rorschach Inkblot Method (RIM; Rorschach, 1921/1942):

The Rorschach consists of ten cards with monochromatic and colored inkblots on them. The cards are presented to the individual tested, to which he or she respond by telling what it might be, or in other words what is perceived in the inkblots. Rorschach assessment generates three sources of information about the personality characteristics of an individual: Structural, Thematic, and Behavioral (Weiner, 2003).

The *structural* component provides information on habitual patterns and situational features of thinking, feeling, and acting processes. For example, the degree of accuracy in which an individual perceives reality, both in regard to people and events. The *thematic* component is based on a projective hypothesis, which is an individual's tendency to attribute one's own internal characteristics (e.g. wishes, motivations, fantasies) to external events without being consciously aware of doing so. This is especially prevalent under ambiguous external situations, such as seeing a Rorschach inkblot that can be interpreted in various ways. The thematic component in people's responses gives clues to the inner symbolic (representational) life that people have, thus clueing to the underlying attitudes and concerns an individual has. An example would be "Someone who is shot and bleeds to death with no one to help", suggesting a possible morbid preoccupation, coupled with a sense of extreme aggression and helplessness in the face of it. The *behavioral* component pertains to how an individual reacts and handles

the testing situation, both the Rorschach task itself and the interpersonal interaction with the clinician. For example, how does one react to being asked to perform in an ambiguous situation? Voicing self-derogatory remarks about not being able to perform well? Becoming restricted and aggressive toward the examiner?

Each of these sources of data serves to illuminate an aspect of the respondent's unique personality style and intrapsychic dynamics. The emergence of standardization in both administration and quantification of such data has enabled increased reliability in expanding the application of the Rorschach (Bornstein & Masling, 2005; Exner, 2003; Weiner, 2003).

Different systems of administration and scoring have been developed throughout the years. However, in terms of standardization, reliability, and existing norms, the Exner Comprehensive System (CS; 2001; 2003) has been especially appropriate for research use. Both administration and scoring of the Rorschach protocols in the current study were done with observance to the Comprehensive System (Exner, 2001, 2003; Viglione, 2004). A structural summary for each protocol was obtained from the Rorschach Interpretive Assistance Program (RIAP; Exner & Weiner, 2003).

Generally, the Rorschach 5th edition of the Comprehensive System (CS; Exner, 2003) was found to have impressive inter-coder reliability, and in both non-patient and clinical populations mean kappa coefficients range from .79 to .88 across various CS coding categories (Meyer, 2004; Viglione & Hilsenroth, 2001; Weiner, 2004); Median interclass correlations of .93 were obtained for inter-coder agreement across 138 CD variables (Meyer, Hilsenroth, Baxter, Exner, Fowler, & Pers, 2002). Test-retest reliability with both children and adults ranged from .75 to .90 over intervals ranging from 7 days to

3 years (Exner & Weiner, 1995; Weiner, 2004). In regard to validity, examining 2276 Rorschach protocols and 5007 MMPI protocols, Hiller, Rosenthal, Bornstein, Berry, & Brunell-Neuleib (2001) concluded that: (1) Validity of the Rorschach effect size (.29) and MMPI effect size (.30) were almost identical; (2) Effect sizes for both instruments were sufficiently large to warrant clinical confidence; (3) The effect size of the Rorschach variables (.37) is superior to the effect size of MMPI variables (.20) in predicting behavioral outcomes.

Within the structural component of the Rorschach, several aspects of personality functioning have been traditionally used: *Attending to experience* (ways in which people focus their attention and perceive their environment); *using ideation* (how people think about the experiences they have: logically? flexibly? moderately? goal-oriented?); *modulating affect* (manner and comfort with which people experience, process, and respond to emotions; the degree and quality of emotional regulation capacities); *managing stress* (extent of psychological resources and capacity for managing internal and external demands in an adaptive manner); *viewing oneself* (capacity to maintain positive self-esteem and enhance self-awareness that guides choices and actions).

Another structural aspect, which is specifically relevant to the current study, is the *ways in which an individual relates to others*. This is influenced by the attitudes toward other people, degree of interaction with others, and manner in which one approaches and manages interpersonal attachments. Utilizing Exner (2001, 2003) 5th edition of the Rorschach Comprehensive System (CS), several variables and indexes that tap representational aspects of interpersonal functioning and psychopathology were utilized in the current study. These variables were utilized in past research (Exner, 2003; Weiner,

2003), both clinically and empirically, with the aim of identifying representational aspects of one's interpersonal functioning, and degree of emotional turmoil and vulnerability to psychopathology.

SumT (Texture) represents a felt need and capacity for intimate attachment. *Texture (T)* responses are often regarded as indicative of one's need for closeness and openness for close emotional attachments, an assumption that emanates from the centrality of tactile interaction between people in everyday life (usually in the form of touch). Also, it has developmental roots as being a major sensory pathway through which an infant gains a sense of trust, safety, and nurturance. Empirical findings indicate that between 60% and 80% of non-patient individuals give at least one texture response (Exner, 2003). While 18% of non-patient adults have no T responses in their Rorschach protocols, approximately 56% of inpatient depressives, 64% of outpatients, and 74% in inpatient Schizophrenic inpatients have no T responses (Weiner, 2003). In patients with paranoid and antisocial personality disorders, the lack of a texture response is highly common, which can be easily understood in light of their gross distrust and often negative orientation toward interpersonal relatedness (Gacono & Meloy, 1994).

SumH represents attentiveness and comfortableness in relationships, and *[H:Hd+(H)+(Hd)]* represents degree of deficiencies in identifications and maladaptive extent of social discomfort. Rorschach percepts that contain *human content* have been found relevant for one's attitudes, tendencies, interest, and features of interpersonal behaviors. Exner (2003) notes the number of human content responses to be indicative of the level of interpersonal interest one has in others. When the number of H is smaller than one and the right-side of the ratio is lower than the left side, it is considered clinically

significant. Specifically, when the number is below the mean, it is often indicative of individuals who tend to be emotionally withdrawn, socially isolated, and who experience conflictual relationships. Furthermore, lower than average human contents are more common among individuals who do not identify with consensual social values, such as delinquents and criminals (Exner, Bryant, & Miller, 1975; Ray, 1963; Richardson, 1963; Walters, 1953). Amount of human content was also significantly correlated with the degree of interpersonal involvement and social relationships, the higher the content and quality the higher the involvement (Draguns, Haley, & Philips; Exner, 2003). In addition, it was found that the proportion of pure human content (perceiving full humans) to part-human responses (perceiving human parts) is indicative of social avoidance (Exner, 2001; Molish, 1967). Furthermore, while in non-patients 60% of human content responses are pure (full-figured human percepts), it falls to 43% among outpatients, 39% among first admission affective disorders, and 37% among first admission schizophrenics (Exner, 2003).

GHR:PHR represents adaptive vs. conflictual interpersonal relationships. The ratio of *Good Human Response to Poor Human Response* (*GHR:PHR*; Perry & Viglione, 1991) has been found useful in assessing deficits in the quality of internalized object-relations and adaptive vs. maladaptive history of interpersonal functioning (Burns & Viglione, 1996; Exner, 2003; Weiner, 2003). When the amount of GHR is larger than PHR, it is considered clinically significant and implies adaptive interpersonal functioning; When the GHR and PHR are either equal in number or the PHR larger than GHR, it is clinically significant and suggests maladaptive interpersonal functioning (Exner, 2003; Weiner, 2003). As such, individuals who give a high number of GHR

responses tend to have satisfying and adaptive interpersonal relationships, which is often the case with non-patient protocols. Nevertheless, it is not unusual to find a substantial number of GHR responses in patients whose interpersonal problems are not extensive. In protocols of patients with severe psychological disturbances, low frequencies of GHR are usually evident (Exner, 2000). As for PHR, these responses correlate highly with maladaptive patterns of interpersonal functioning, along with chaotic and conflictual histories of interpersonal relationships. Also, social rejection is often evident in those individuals' histories, usually associated with decreased social awareness and inappropriate interpersonal behaviors (Exner, 2003; Weiner, 2003). PHR responses typically appear with substantial frequency in protocols of individuals with severe psychopathology, low to moderate frequency in protocols of most patient groups, and low frequencies in non-patient protocols (Exner, 2003).

ISOL represents interpersonal withdrawal and isolation. The *Isolation Index (ISOL)* is another index of interpersonal functioning, comprised of several content variables on the Rorschach, and is often interpreted as one's interest in and motivation to interact within the social world, consequently the capacity to enjoy rewarding relationships (Exner, 2003; Weiner, 2003). When ISOL is greater than 0.33, it is considered clinically significant (Exner, 2003;Weiner, 2003). In one outpatient population a significant negative correlation was found between ISOL and therapists' rating for positive, active interpersonal relationships. Complementing this finding was a positive significant correlation between negative ISOL and therapists' rating of maladaptive interpersonal functioning (Exner, 2003). Furthermore, positive ISOL was found significantly correlated with both teacher and psychologist ratings of social

isolation and withdrawal in children and adolescents with psychiatric problems (Exner, 2003). In another study, 86% of adult outpatients diagnosed with schizoid or schizotypal personality disorder had a positive ISOL index (Exner, 2003). Within a non-patient population of students, a non-positive ISOL index was significantly correlated with peer ratings of social popularity (Farber, Exner, & Thomas, 1982). In non-patient adults, only 7% have positive ISOL values, while in outpatient population approximately 15% have ISOL values that are positive. Among first-admission inpatients, in affective disordered individuals approximately 30% have positive ISOL.

AG represents expectation and capacity for interpersonal assertiveness and competitiveness. *Aggressive Movement (AG)* response was found to be significantly correlated with both extreme scores of verbal and physical aggressiveness in patients (Kazaoka, Sloane, & Exner, 1978), outpatients (Exner, 2003), and a normative sample of children (Exner, Kazaoka, & Morris, 1979). These studies indicate that elevated AG responses are often positively correlated with aggressive behaviors, along with hostile and negative interpersonal attitudes. Nevertheless, it is important to emphasize that presence of AG responses does not necessarily mean that aggressive behaviors will be manifested, because sublimated and adaptive forms can be manifested via competitiveness and assertiveness. And indeed, non-patients tend to have more protocols containing at least one AG response than most patient groups. Exner (2003) reports that 63% of non-patients give at least one AG response, 12% give two or more AG responses. For outpatients, 48% gave at least one AG response, and only 4% gave more than two AG responses. For inpatients, 39% of first admitted affective disorder patients gave at least one AG response and 8% gave more than two. In first admitted schizophrenics, AG

response frequency was significantly higher than in any of the other groups studied. 61% gave at least one AG response and 26% gave two or more AG responses. Other empirical investigations found mixed results, often reflecting this variable as being non-indicative of real-life aggression (Goldstein, 1998; White, 1999). Further elaboration of the AG coding was suggested by Meloy & Gacono (1994), and included AG sub-scores for aggressive content (AgC), aggressive potential (AgPot), aggressive past (AgPast), and sadomasochism (SM). These suggested scores add dimensionality thus complexity to the understating of aggressive drives, interpersonal violence, and nature of object-relations attachment by capturing greater instances of aggressiveness on the Rorschach. However, these elaborations of the AG response are still not included in the Exner Comprehensive System.

COP represents interest and expectation in collaborative engagement with others. *Cooperative Movement* (*COP*) is another valuable Rorschach variable indicative of interpersonal functioning. While COP appears in approximately 83% of non-patient protocols, it appears in only 57% of outpatient protocols (Exner, 2003). Perceiving several cooperative interactions on Rorschach inkblots is significantly associated with social acceptance as measured by peer sociometric studies, and conversely seeing few or no cooperative movement was significantly correlated with low social acceptance and negative views by peers (Exner, 2003). COP responses were also found to be significantly correlated within the therapeutic context. Specifically, patients in group therapy who gave two or more COP responses were more likely to talk in therapy and engage their group members in comparison to group members who had no COP responses on their Rorschach (Exner, 2003). Additionally, frequency of COP responses

was found to be indicative of therapeutic change and success, and increased frequency at discharge from hospitalization was significantly associated with reported increase in interpersonal adjustment and satisfaction (Exner, 1993). In experimental studies, frequency of COP responses was positively correlated with a tendency for actual altruistic interpersonal behavior (Alexander, 1995; Exner, 1993). However, it is important to note that like other variables on the Rorschach (and any other personality assessment measure), interpretation based on one variable is unwise and a multi-variable integrative approach is preferred. One striking finding is the existence of one or more COP responses in 70% of protocols given by individual adjudicated for sexual homicide (Gacono & Meloy, 1994).

M Frequency and Accuracy represents the capacity for empathy and accurately understanding interpersonal situations. The amount and quality of *human movement (M)* responses have been found to be associated with one's capacity for empathic perception of others (Exner, 2003; Weiner, 2003). As such, the number and quality of M responses correspond to one's degree of interest in and capacity to accurately perceive others' internal mental states, needs, difficulties and wishes, a capacity that is often termed Theory of Mind (ToM) in developmental psychology, or Reflective Functioning in the psychoanalytic tradition. Having a well developed capacity to accurately perceive, understand, and integrate others' needs and motivations is paramount for having adaptive, mutual, and positive interpersonal relationships. Lacking empathic capacity can dramatically undermine one's social adjustment and ability to enjoy chaos- and conflict-free attachments. Accurately seen human movement responses suggest well-developed empathic capacity, while perceptually distorted M responses indicate major deficits in

such interpersonal capacity (Weiner, 2003). The number of M responses in a protocol is of clinical importance, and although the expected mean varies depending on the personality style of the individual (range between 2.99 in introversives to 6.42 in extratensives), the adaptive mean threshold is considered to be at least four M responses per protocol (Exner, 2003).

There is considerable variability in the frequency of accurate M among non-patients, which makes it not as useful for diagnostic purposes. Yet, only between 1.5% to 6.5% of non-patients give poor M responses (Exner, 2003; Weiner, 2003). As such, it appears that poorly perceived M responses are more clinically relevant for differential diagnosis than well accurately perceived M responses. Weiner (2003) indicates that two or more accurately perceived M responses are indicative of adequate empathic capacity. Nevertheless, even the existence of one poorly perceived M response indicates a maladaptive impairment in social perception, and there is a positive correlation between the number of poor M responses and severity of deficits in perceiving people and functioning interpersonally (Exner, 2003). Within one patient population, the frequency of poor M responses was 32% among outpatients, 38% in inpatient depressives, and 76% in inpatient schizophrenics. Furthermore, the existence of even one poor M response in a protocol constitutes a criterion in itself on the Rorschach Psychotic Thinking Index (PTI) (Exner, 2003), which further underlines its interpretive meaning in regard to the psychological failure to perceive and understand reality.

a:p represents the tendency to assume an acquiescent stance in relationships. The *a:p ratio*, or active vs. passive quality of movement perceived on the Rorschach has been also found to be indicative of interpersonal behaviors, usually associated with a

tendency toward more passive and dependent behavior. This is especially true with people who have an ideational and avoidant style. While a>p has little clinical interpretive utility, p>a+1 is considered clinically significant (Exner, 2003). Only 2% of non-outpatient adults give records in which the value for passive movement is more than one point greater that the value for active movement (Exner, 2003). Nevertheless, within outpatient and inpatient adults, the findings are different. About 30% of outpatients' protocols contain an a:p ratio in which the passive movement is greater than the active movement by more than one point. This is also valid for 25% of first admission affective disorders and 18% of first admission schizophrenics (Exner, 2001). In another study, the maladaptive a:p ratio was significantly correlated with verbal dependency gestures, yet not with nonverbal dependency gestures (Exner, 2003).

Fd represents a dependent orientation in relationships. *Food (fd)* responses have been related to oral dependency needs and tendencies, especially in protocols which also contain a passive tendency marked by the a:p ratio (Exner, 2003; Schafer, 1954; Weiner, 2003). One example has been found in the protocols of outpatients diagnosed with passive-dependent personality disorder, in which 79% had maladaptive a:p ratio and approximately 80% had at least one food response (Exner, 2003). An elaboration of the interpersonal data food responses carry has been done through the development of the Rorschach Oral Dependency Scale (ROD), which has been the most widely used projective measure of dependency (Masling, Rabie, & Blondheim, 1967; Bornstein & Masling, 2006). It has been successfully used to predict dependency-related behaviors in laboratory, classroom, and clinical settings, in both clinical and non-patient samples (Bornstein & Masling, 2006). The ROD is based on psychoanalytic theory and involves

coding for 16 categories of responses that include references to food, food sources, food objects, food providers, oral instruments, passivity, and gifts.

PER represents intellectual authoritarianism often used as a way of dominating others. *Personalized Responses (PER)* often offer additional information about an individual's tendency for interpersonal defensiveness and domineering orientation, especially when those type of responses are given excessively. When given frequently on a protocol, PER responses are suggestive of a form of rigid intellectual authoritarianism used as a defense against perceptions of weakness by others, and at times even as a way of dominating others through reflection of intellectual supremacy (Exner, 2003; Weiner, 2003). Such extreme tendency often causes interpersonal rejection, alienation, and decreased capacity to form mutual and intimate relationships based on sharing and support. In non-patients, the median and modal values of PER are one, while in an outpatient population about 44% give at least one PER response and 33% give more than two. In another study (Exner, 2003) a frequency of four PER responses per protocol was significantly correlated with therapists' perception of these patients as resisting change and having questionable motivation for psychotherapy.

HVI represents hypervigilance and difficulty with interpersonal trust and security. The *Hypervigilance Index (HVI)* suggests a continuous state of preparedness by the individual, usually reflecting an inner sense of mistrust and the expectation of negative interactions with the social environment (Exner, 2003; Weiner, 2003). HVI is considered clinically significant when at least four of its eight comprising variable s are positive. HVI is associated with experiencing relationships as potentially dangerous, consequently approaching others with guarded style and increased need to preserve interpersonal

boundaries and privacy. HVI is rarely positive in non-patient population regardless of age, yet within patient population it is more frequent: 16% in inpatient schizophrenics, 8% in inpatient depressives, and 11% in outpatients (Weiner, 2003). Furthermore, Exner (2003) reported a finding of positive HVI in 90% of patients with paranoid personality disorder, and 88% of patients diagnosed with paranoid schizophrenia.

CDI represents the capacity and resources for coping with affective, ideational, and interpersonal stressors. The *Coping Deficit Index (CDI)* is a composite variable within the Rorschach Comprehensive System (CS), which is comprised of 11 potential individual variables, seven of which relate to interpersonal functioning. The CDI is considered clinically significant when 4 or more of the included variables are positive. In general, it has been found to be clinically significant, with greater frequency in patients who complain about interpersonal problems than those who do not (Exner, 2003). One example is interpersonal aggression, both physical and verbal. Young, Justice, & Erdberg (1999) found that positive CDI is one of eight characteristics of incarcerated males with lengthy histories of violent behavior. In younger individuals, CDI scores have been found to be significantly correlated with verbal aggression (Goldstein, 1998). The CDI also provides a general index of one's available resources for adaptive coping with everyday stressors within the affective and ideational domains (Weiner, 2003). In individuals for whom the CDI is significantly elevated, there is great likelihood for them to show increased vulnerability to deficits in coping with everyday stressors. A positive CDI is often associated with depression that is characterized by an intense sense of helplessness, personality disorders, and substance abuse (Weiner, 2003).

In addition to the CDI, the degree of emotional distress and psychopathology will be tapped through several other Rorschach variables and indexes, including: WSum6 (disordered thinking and judgment); S-CON (Vulnerability to self-harming behaviors and suicidality); and DEPI (vulnerability to emotional and affective disruptions).

The *Weighted Sum of the Six Critical Special Scores (WSum6)* is an important indicator of the degree of deficits in logic and coherency of thinking processes and judgment, often elevated when emotional distress and psychopathology exist (Kleiger, 1997; Exner, 2003; Weiner, 2003). The larger the WSum6 becomes, the more likely an individual will manifest arbitrary, circumstantial, and loose ideational processes (thought disorders), which often lead to faulty judgment and maladaptive behavior. In general, a WSum6 of seven and above is considered clinically significant. Exner (2003) reports that within an outpatient population, approximately 83% give at least one response which qualifies an assignment of a critical score, the mode is two, and the mean WSum6 is 4.48. On the other hand, within a group of first admitted schizophrenics, the average is approximately 12 critical scores per Rorschach protocol, and the mean WSum6 is 52.31 (Exner, 2003). For non-patients, the mean WSum6 is lower than for outpatients and inpatients. Furthermore, within other distinct clinical groups (e.g., suicidal adolescents) an elevated mean WSum6 has been found (Goldstein, 1998; Silberg & Armstrong, 1992). Adult women with history of incest who undergo therapy (Malone, 1996) and juvenile delinquents (Van-Patten, 1997) also show elevated WSum6.

The Rorschach *Depression Index (DEPI)* is a measure of vulnerability for negative emotional experience and affective disruption (Exner, 2003). The DEPI is especially suitable for discriminating Major Depressive Disorder from other clinical

disorders when it is positive in the presence of a positive CDI index (Exner, 2003). It is considered clinically significant when five or more of its seven comprising variables are positive.

Psychopathology increases the risk for self-harming and suicidal behaviors, a risk which can be predicted to an extent by the Rorschach *Suicidal Constellation (S-CON)* index (Exner, 2003; Fowler, Piers, Hilsenroth, Holdwick, & Padawer, 2001). It is considered clinically significant when eight or more of its twelve comprising variables are positive. In fact, the Rorschach is the most commonly used method for the assessment of suicidality in clinical settings (Bongar, 1991). It proved to be valid in predicting individuals who will complete suicide (Affra, 1982; Exner, 1993a; Exner & Wiley, 1977; Silberg & Armstrong, 1992), yet also the assessment of relative risk for near-lethal suicidal activity or at-risk individuals (Fowler et al., 2001). The S-CON consists of twelve variables, of which eight or more constitute the criterion for positive S-CON. In 6% to 12% of patient groups, eight or more positive variables appear, whereas none appear in the non-patient group (Exner, 2003).

Mutuality of Autonomy Scale (MOAS; Urist, 1977):

The Mutuality of Autonomy Scale (MOAS) was developed by Urist (1977) to assess the quality of object relations as they are represented in Rorschach responses that contain explicit or implied interactions among people, animals, or inanimate objects. Based upon object-relations theory and gradual psychological development toward separation-individuation, the MOAS reflects a developmental model that is rooted in the theoretical work of Kohut (1971, 1977), Kernberg (1966, 1975), and Mahler, Pine, &

Bergman (1975). Specifically, the scale assesses various levels or stages within the separation-individuation process, while maintaining a sense of relatedness based on individual autonomy and the capacity for mutuality (Lerner, 2006; Stricker & Gooen-Piels, 2004).

The quality of object relations as depicted by the Rorschach movement scores are assigned a certain score based on a continuum that ranges from mutual, empathic relatedness (level 1) to malevolent destruction (level 7). A score of 1 represents the most adaptive and developmentally mature level of relatedness (mutual and benevolent), while scores of 7 represent a passive, malevolent, and destructive level of relatedness. Specifically, this continuum includes reciprocity-mutuality-collaboration-corporation, parallel activity-simple interaction, anaclitic-dependent, reflection-mirroring, magical control-coercion, severe imbalance-destruction, and envelopment-incorporation (Stricker & Healy, 1990; Hilsenroth & Charnas, 2006; Holaday & Sparks, 2001; Urist, 1977). The MOA yields several derived scores, thus enabling a better understanding of the range of an individual's capacity for object relations functioning on the dimensions of self-other differentiation and empathic relatedness (Hilsenroth & Charnas, 2006; Holady & Sparks, 2001; Urist, 1977).

The MOA was significantly related to linguistic measures of relatedness (Rosenberg, Blatt, Oxman, McHugo, & Ford, 1994), and to changes in love/intimacy themes (Fertuck, Bucci, Blatt, & Ford, 1994). Interrater reliability of the MOA is considered adequate, ranging from .52 perfect agreement, .66 agreement within one-half point, and.86 agreement within one-point (Huprich & Greenberg, 2003; Stricker & Gooen-Piles ,2004). Regarding the validity of the MOA, Urist (1977) reported significant

correlations between the MOA and autobiographical data and staff rating of inpatients .Also, Spear & Sugarman (1984) successfully differentiated between subgroups of borderline pathology, and Strauss & Ryan (1987) differentiated between restricting and bulimic anorexics from controls. The MOA was successful in the prediction of hospitalization in adulthood through childhood MOA (Tuber, 1983), and characterization of object-representations of self-mutilating borderline patients (Fowler, Hilsenroth, & Nolan, 2000).

The MOAS has been utilized in various clinical and empirical contexts, and in general findings have shown it to be effective in differentiating among different psychiatric diagnoses (Stricker & Gooen-Piels, 2004). Furthermore, significant correlations have been found between the scale scores and ratings of psychopathology, clinical symptomatology, and object relational aspects of functioning (Huprich & Greenberg, 2003; Lerner, 1998, 2006; Stricker & Gooen-Piels, 2004).

In his initial study when comprising and validating the MOA scale, Urist (1977) found significant correlations between the MOA scores and clinician-based and other independent ratings of object relations. Moreover, in a second study with both inpatients and outpatients representing a broad spectrum of diagnoses, Urist & Schill (1982) found a significant correlation between independent ratings of object relations and MOA scores. The MOA was also found to correlate significantly with independent DSM-based diagnosis of psychopathology, and the mean MOA score distinguished among schizophrenic, affective, and non-psychotic disorders (Harder, Greenwald, Wechsler, & Ritzler, 1984), and between anorectics and controls (Strauss & Ryan, 1987). Similarly,

Blatt, Tuber, & Auerbach (1990) reported the mean MOA score to be significantly correlated with independent ratings of clinical symptoms and thinking disorders.

More specifically in regard to object relations functioning, Ackerman, Hilsenroth, Clemence, Weatherill, & Fowler (2001) found good convergent validity with a well-established measure of object relations (SCORS, Westen, 1991). Individuals who reflected benevolence in their object relational patterns on the SCORS had more differentiated object representations on the MOA. Within personality disordered individuals, a clinical group with often pervasive disruptions in object relations and interpersonal adaptation, the MOA successfully differentiated between types of personality disorders (Spear, 1980). It was also successfully differentiated among subtypes of borderline patients and schizophrenic (Spear & Sugarman, 1984). Within a university outpatient clinic setting, the MOA scores were the only factor that significantly correlated with the total number of borderline symptoms, along with DSM-IV borderline criteria of unstable relationships and suicidality (Blais, Hilsenroth, Fowler, & Conboy, 1999). Stuart, Westen, Lohr, Benjamin, Becker, Vorus, & Silk (1990) found that borderline patients had higher levels of MOA malevolent human interaction than did depressives and controls, suggesting that anticipation of hostile interpersonal interaction on the MOA is a useful differential diagnostic feature. MOA scores have also been used to differentiate among levels of dependency orientation through analysis of early memories, where it was found that non-healthy dependent individuals had significantly worse MOA scores (Fowler, Hilsenroth, & Handler, 1995). The utility of the MOA scale has also been found to be effective in both non-patient and clinical child and adolescent

populations, successfully differentiating between features of internal experiences and object relational aspects of functioning (for review, see Lerner, 1998, 2006).

In the current study the following derived variables will be utilized: *MOA-Sum* - Raw sum of all scores found per protocol, reflecting the overall degree of deficits in self-object differentiation and capacity for mutual and empathic relatedness; *MOA-Total-L* - total number of adaptive scale points per protocol, reflecting the capacity for adaptive internalized object-relations and a general capacity and tendency for adaptive object-relations functioning; *MOA-Total-H* - total number of maladaptive scale points per protocol, reflecting the capacity for maladaptive internalized object-relations and representational interpersonal functioning; *MOA-Mean* - Mean score per protocol, reflecting the most likely and preferred object representation schema, or the most likely way of relating to others and representational object-relation functioning; *MOA-H* - single highest MOA score, reflecting the most disturbed level of interpersonal functioning in regard to internalized object-relations; *MOA-L* - single lowest MOA score, reflecting the most adaptive level of interpersonal functioning in regard to internalized object-relations; and *MOA-Range* - [MOA-H - MOA-L), reflecting the range or repertoire of potential representational interpersonal functioning, thus variability.

CHAPTER 3

STATISTICAL ANALYSIS AND RESULTS

All the statistical analyses were done with the Statistical Package for the Social Sciences (SPSS) software version 15.0. Prior to conducting the statistical analyses for testing the study's hypotheses, descriptive statistics were examined for all variables. No extreme figures were found which would suggest a data entry error.

Scoring reliability for the Projective Measures

Inter-rater reliability was established with regard to the scoring of the Rorschach and MOAS variables. Prior to establishing inter-rater reliability, both raters scored together five practice Rorschach Protocols and their corresponding MOAS. Following Handler (personal communication, January 21, 2007), Hilsenroth & Charnas (2006), and Weiner (1991) in their guidelines for consensus scoring of these projective measures, the primary investigator scored all protocols, with a second scorer scoring 25% of randomly selected protocols. Discrepancies between scores on the 20 jointly scored protocols were discussed and resolved to mutual agreement.

Inter-rater reliability was calculated based on these protocols, using the kappa coefficient (κ) for the Rorschach variables and Interclass Correlation Coefficient (ICC) for the MOAS scores. Both statistics are suitable for establishing inter-rater reliability because they correct observed agreement for chance agreement (Cicchetti, 1994; Cicchetti & Sparrow, 1981; Meyer, 2004; Shrout & Fleiss, 1979; Weiner, 1991). The

kappa coefficient was utilized for the Rorschach variable since most of the variables are categorical in nature. The MOAS scores, on the other hand, are continuous variables. Thus, a two-way, mixed-effect, interclass correlation coefficient (ICC; Shrout & Fleiss, 1979) for each of the two coders for all the 80 subjects was utilized. For the Rorschach, inter-rater reliability was established for the following groups of variables: Location, Developmental Quality, Form, Form Quality, Movement, Active/Passive, Color, Achromatic Color, Diffuse Shading, Vista, Texture, Reflection, Form Dimension, Form Quality, Pairs, and Populars. Since arriving at a kappa score for the Rorschach Special Scores and Content is problematic due to all of the potential options, scores from both raters were included for all protocols on these two variables. For the MOAS, inter-rater reliability was calculated for the scores given to all Rorschach responses containing Human (M), Animate (FM), and Inanimate (m) Movement.

For the Rorschach variables, the kappas ranged from .72 (Vista) to 1.00 (Texture), with an average kappa (κ) score of .87. Table A-1 (Appendix) summarizes the kappa values for the above Rorschach variables. The Interrater reliability of the MOAS while utilizing the Inter Class Correlation Coefficients (ICC) was .90, ranging from .86 to .93 with 95% confidence interval.

Common interpretive guidelines for both Kappa and ICC are: Values less than .40 indicate *poor* agreement, between .40 and .59 indicate *fair* agreement, between .60 and .74 indicates *good* agreement, and values greater than .74 indicate *excellent* agreement (Cicchetti, 1994; Cicchetti & Sparrow, 1981; Shrout & Fleiss, 1979; Weiner, 1991). In light of this convention for inter-rater reliability, the kappa values in the current study are indicative of overall excellent inter-rater agreement for the Rorschach variables, with

the exception of one variable (Vista) for which a marginal-excellent agreement was established. As for the MOAS, the ICC value is indicative of excellent inter-rater agreement.

Socio-demographic variables

An initial investigation of potential differences in age, educational level, and frequency of gender between the clinical and comparison group was done. As reported previously, there was a statistically significant difference in mean age between the groups [$t(78) = -5.25$, $p<.001$]. Therefore, age was used as a covariate in the following analyses. No significant difference was found between the groups in relation to educational level [$t(78) = .8$, $p=.43$] or gender [$\chi^2(1, N = 80) = 1.00, p = .32$]. Tables A-2, A-3, A-4 (Appendix) summarize the values for the above variables.

Review of Findings for the Research Questions

First Research Question

The first research question focused on the differences in the *extent of psychological distress and psychopathology* between the clinical and comparison group, tapped by both the SCL-90-R self-report and Rorschach projective test. It was comprised of two hypotheses.

The *first hypothesis* focused on the between-groups differences as measured by the SCL-90-R self-report Global Severity Index (GSI). Tables A-5 and A-6 (Appendix)

summarize the values for the above variables. Using the SCL-90-R GSI, an analysis of covariance (ANCOVA) was utilized, controlling for age as a covariate. An analysis of covariance (ANCOVA) showed that while controlling for age as a covariate, there was a significant main effect for the group on the degree of reported psychopathology, $F(1,77) = 6.43$, $p=.01$. On the average, the degree of reported symptomatology in the clinical group ($M = 110.85$, $SD = 47.97$) was significantly higher than in the comparison group ($M = 73.38$, $SD = 44.38$). This result supports the first hypothesis.

The *second hypothesis* focused on the between-groups differences as reflected by the Rorschach CDI, HVI, S-CON, DEPI, and WSum6. Since the Rorschach Coping Deficit Index (CDI), Depression Index (DEPI), and Suicidal Constellation (S-CON) are all categorical variables, a non-parametric Mann-Whitney test was utilized to check for significant difference between the groups. Tables A-7, A-8, and A-9 (Appendix) summarize the values for the above variables. The analysis revealed a significant between-group differences in the magnitude of vulnerability to affective disruptions and depressive experiences (DEPI), $\underline{u} = 580.00$, $p=.01$. Specifically, the clinical group showed greater vulnerability ($M = 46.00$) than the comparison group ($M = 35.00$). Furthermore, the two groups also differed significantly in their vulnerability for self-harming and suicidal behaviors (S-CON), $\underline{u} = 640.00$, $p=.01$. Specifically, the clinical group showed greater vulnerability for self-harm and suicidality ($M = 44.50$) than the comparison group ($M = 36.50$). However, the two groups did not show significant differences in their Rorschach CDI ($\underline{u} = 720.00$, $p=.34$) and HVI ($\underline{u} = 700.00$, $p=.13$) indexes. Since the Rorschach Weighted Sum of the Six Critical Special Scores (WSum6) is a continuous variable, an analysis of covariance (ANCOVA) showed that while

controlling for age as a covariate, there was a significant main effect for the group on the degree of disordered thinking (WSum6), $F(1,77) = 4.37$, $p=.04$. The results indicated that on the average, the degree of disordered thinking and faulty judgment was significantly higher in the clinical group ($M = 15.53$, $SD = 16.14$) than in the comparison group ($M = 11.44$, $SD = 13.31$). These results partially support the second hypothesis.

Second Research Question

The second research question focused on the differences between the two groups in the *extent and source of reported interpersonal problems*, tapped by the Inventory of Interpersonal Problems (IIP-32). It was comprised of two hypotheses. The *first hypothesis* focused on the between-group differences in the general magnitude of interpersonal problems as measured by the IIP-32 Total Score. The *second hypothesis* focused on the between-group differences in psychological distress emanating from communion and agentic aspects of interpersonal functioning, measured by the IIP-32 Communion and Agency scales. Tables A-10 and A-11 (Appendix) summarize the values for the above variables.

Since all these variables are continuous, a multiple analysis of covariance (MANCOVA) revealed that while controlling for age as a covariate, there was a significant difference between the groups in both general magnitude of interpersonal problems and the extent of distress originating from communal and agentic aspects of interpersonal functioning. Specifically, the results indicated that on the average, the degree of reported interpersonal problems in the clinical group ($M = 42.98$, $SD = 18.96$)

was significantly higher than in the comparison group (M = 30.7, SD = 17.85), F(1,77) = 7.51, p=.008. Furthermore, on the average, the degree of distress originating from communal aspects of interpersonal functioning in the clinical group (M = 6.08, SD = 9.29) was significantly higher than in the comparison group (M = 1.14, SD = 9.02), F(1,77) = 5.87, p=.02. In addition, the average degree of distress originating from agentic aspects of interpersonal functioning in the clinical group (M = -6.85, SD = 11.17) was significantly higher than in the comparison group (M = -1.90, SD = 6.37), F(1,77) = 5.47, p=.02. These results support both the first and second hypotheses.

Third Research Question

The third research question focused on the potential difference between the groups in the *quality of internalized object-relations*, tapped by both the Rorschach test and Mutuality of Autonomy Scale (MOAS). There were five specific hypotheses.

The *first hypothesis* focused on the between-groups differences in the capacity to sustain interpersonal interest, involvement, and comfort within relationships. Tables A-12, A-13, and A-14 (Appendix) summarize the values for the above variables. The first hypothesis was examined through comparing the two groups on the Rorschach variables of SumH, H:[Hd+(H)+(Hd)], ISOL, GHR:PHR, and CDI. Since SumH and ISOL are continuous variables, a multiple analysis of covariance (MANCOVA) revealed that while controlling for age as a covariate, there was a significant difference between the groups in the levels of both SumH and ISOL, yet in opposite directions. Specifically, the results indicated that on the average, the degree of general interest in people (SumH) in the

clinical group (M = 7.23, SD = 4.02) was significantly higher than in the comparison group (M = 5.03, SD = 1.93), $F(1,77) = 9.86$, p=.002. However, the results also indicated that on the average, the degree of interpersonal isolation and social avoidance (ISOL) in the non-patient group (M = .25, SD = .17) was significantly higher than in the clinical group (M = .15, SD = .10), $F(1,77) = 4.56$, p=.04. Since the remaining variables are categorical, a non-parametric Mann-Whitney test was utilized to check for significant difference between the groups. The test revealed a significant between-groups difference in the degree of effective and adaptive interpersonal behaviors (GHR:PHR), $\underline{u}$ = 560.00, p=.007. Specifically, the clinical group showed greater tendency for maladaptive and ineffective interpersonal functioning (M = 46.50) than the comparison group (M = 34.50). However, a Mann-Whitney test indicated the two groups did not differ significantly in their source of identifications and degree of realistic interest in others H:[Hd+(H)+(Hd)]), $\underline{u}$ = 680.00, p=.17, n.s. Also, a non-significant difference was found in their degree of social maturity (CDI), $\underline{u}$ = 720.00, p=.34, n.s. These results partly support the first hypothesis.

The *second hypothesis* focused on the between-groups differences in the capacity for anticipating interpersonal intimacy and security within relationships. It was examined through comparing the two groups on the Rorschach variables of SumT and HVI. Tables A-15, A-16, and A-17 (Appendix) summarize the values for the above variables. Since SumT is a continuous variable, an analysis of covariance (ANCOVA) showed that while controlling for age as a covariate, there was no significant difference between the groups in the felt need for closeness, relatedness, and emotional intimacy (SumT), $F(1,77)$ = 2.21, p=.15, n.s. Since HVI is a categorical variable, utilizing a non-parametric Mann-

Whitney test indicated no significant between-groups differences in the degree of interpersonal hypervigilance, guardedness, and mistrust (HVI), u = 700.00, p=.13, n.s. These results do not support the second hypothesis.

The *third hypothesis* focused on the between-groups differences in the capacity to balance interpersonal collaboration and acquiescence with competitiveness and assertiveness when relating to other people. It was examined through comparing the two groups on the Rorschach variables of COP, AG, a:p, PER, and fd. Tables A-18, A-19, and A-20 (Appendix) summarize the values for the above variables. A multiple analysis of Covariance (MANCOVA) was utilized for the continuous variables of COP, AG, PER, and fd, while a non-parametric Mann-Whitney test was utilized for the a:p variable. The MANCOVA revealed that while controlling for age as a covariate, there was a significant difference between the groups in the mean levels of AG and PER, yet there was no significant difference in the mean levels of COP and fd. Specifically, the results indicated that on the average, the degree of anticipation that relationships will carry a form of competitiveness, assertiveness, and aggressiveness (AG) in the clinical group (M = 1.18, SD = 1.57) was significantly higher than in the comparison group (M = .65, SD = .83), F(1,77) = 4.06, p=.05. Also, the results showed that on the average, the tendency for intellectual authoritarianism as an interpersonal 'tactic' for dominating others (PER) in the clinical group (M = 1.08, SD = 1.54) was significantly higher than in the comparison group (M = .33, SD = .57), F(1,77) = 4.89, p=.03. No significant between-groups differences were found in regard to the degree of positive and collaborative anticipation of relationships (COP), F(1,77) = 3.13, p=.08, n.s. Similarly, a non-significant difference was found between the groups concerning the degree of dependency orientation and

interpersonal naiveté (fd), $F(1,77) = .16$, $p = .69$, n.s. A Mann-Whitney test showed no significant between-groups difference in regard to the tendency to assume a passive interpersonal stance (a:p), $\underline{u} = 720.00$, $p = .32$, n.s. These results partly support the third hypothesis.

The *fourth hypothesis* focused on the between-groups differences in the capacity to perceive people and social situations in an accurate and empathic manner. It was examined through comparing the clinical and comparison groups on the two Rorschach accurately (Good M) and inaccurately (Poor M) perceived Human Movement variables. Tables A-21 and A-22 (Appendix) summarize the values for the above variables. Both variables are continuous, thus utilizing a multiple analysis of covariance (MANCOVA) revealed that while controlling for age as a covariate, there was a significant difference between the groups in levels of both Good and Poor Human Movement. Specifically, the results indicated that on the average, the degree of potential empathic and reflective capacity (GoodM) in the clinical group ($M = 3.68$, $SD = 2.37$) was significantly higher than in the comparison group ($M = 2.73$, $SD = 1.66$), $F(1,77) = 6.35$, $p = .01$. However, the findings also showed that on the average, the potential for maladaptive impairment and deficits in accurately perceiving and understanding interpersonal situations (PoorM) was significantly higher in the clinical group ($M = 1.33$, $SD = 1.70$) than in the comparison group ($M = .60$, $SD = .74$), $F(1,77) = 10.42$, $p < .01$. These results partly support the fourth hypothesis.

The *fifth hypothesis* focused on the between-group differences in the complexity of object-relational representations, reflected in the degree of separation, differentiation, empathic relatedness, and mutuality in self-other representations. To test if significant

between-groups differences exist in regard to this aspect, the following Mutuality of Autonomy Scale (MOAS) variables were used: Raw sum of all scores found per protocol (MOA-Sum), total number of adaptive scale points per protocol (MOA-Total-L), total number of maladaptive scale points per protocol (MOA-Total-H), Mean score per protocol (MOA-Mean), single highest MOA score (MOA-H), single lowest MOA score (MOA-L), MOA range of scores per protocol (MOA-Range; MOA-H minus MOA-L). In light of all these variables being continuous, the between-group comparison was carried out by utilizing a multiple analysis of covariance (MANCOVA), while controlling for age as a covariate. Tables A-23 and A-24 (Appendix) summarize the values for the above variables. The test revealed that while controlling for age as covariate, there was a significant difference between the groups in the levels of MOA-Sum, MOA-Total-H, MOA-Mean, MOA-H, and MOA-Range. No significant between-groups differences were found in the levels of MOA-Total-L and MOA-L.

Specifically, the results indicated that on the average, the degree of overall deficits in self-object differentiation and capacity for mutual and empathic object-relatedness (MOA-Sum) was significantly higher in the clinical group (M = 16.48, SD = 14.47) than in the comparison group (M = 9.68, SD = 6.10), $F(1,77) = 8.86$, p=.004. Also, the average degree of maladaptive internalized object-relations functioning (MOA-Total-H) in the clinical group (M = 1.60, SD = 2.35) was significantly higher than in the comparison group (M = .48, SD = .88), $F(1,77) = 8.09$, p=.006. Furthermore, the most likely and preferred mode of object-relational functioning and relating (MOA-Mean) was significantly more maladaptive in the clinical group (M = 2.48, SD = .80) than in the comparison group (M = 2.15, SD = .70), $F(1,77) = 5.43$, p=.02. Also, in terms of the most

disturbed level of object-relational functioning (MOA-H), the clinical group showed significantly more disturbance (M = 4.13, SD = 1.83) than the comparison group (M = 3.20, SD = 1.57), $F(1,77) = 9.04$, p=.004. Last, on the average the clinical group showed greater range and repertoire of potential object-relations functioning (MOA-Range) (M = 2.80, SD = 1.90) than the comparison group (M = 1.90, SD = 1.63), $F(1,77) = 7.93$, p =.006. No significant differences were found between the groups in the capacity for adaptive internalized object-relations functioning (MOA-Total-L), $F(1,77) = 3.53$, p =.06, n.s. Also, in terms of the most adaptive level of object-relational functioning (MOA-L), no significant differences were detected between the groups, $F(1,77) = .004$, p=.95, n.s. These results partly support the fifth hypothesis.

CHAPTER 4

DISCUSSION

The current study tapped the broad question regarding the role and reciprocal effect between interpersonal functioning and psychopathology. More specifically, the study aimed at clarifying the magnitude and nature of interpersonal problems and quality of object-relational functioning in individuals who seek outpatient individual psychotherapy. It explored whether both on the conscious and unconscious levels, individuals who seek psychotherapy have a quantitatively and qualitatively different experience of their interpersonal relationships, specifically the extent and sources of relational problems along with underlying aspects of object-relations functioning. Next, an integrative discussion of the study's findings will be presented, their conceptual and clinical relevance, limitations of the current study, and subsequent recommendations for future explorations of this important interface between interpersonal functioning and psychopathology.

Question 1 – General Psychological Distress and Psychopathology

In general, the findings indicate that as predicted, individuals who seek outpatient individual psychotherapy tend to suffer from significantly higher levels of general psychological distress and vulnerability to psychopathology than individuals who do not seek psychotherapy. When compared across specific domains of psychopathology, the picture remains fairly consistent. Affectively, individuals who seek outpatient

psychotherapy have significantly greater vulnerability to negative emotional experiences (e.g., depression), affective disruptions, and disregulated mood. Cognitively, these individuals manifest greater magnitude of disordered thinking processes, specifically greater deficits in logic and coherency, along with cognitive slippage and proneness to faulty judgment. Furthermore, these individuals exhibited a significantly greater tendency for self-harming and suicidal behaviors. Nevertheless, in the current clinical sample there was no indication that these individuals suffer from lower available resources for adaptive coping with everyday stressors in comparison to individuals who do not seek psychotherapy. Such finding suggests that although these individuals carry a significant degree of vulnerability to psychopathology, along with actually suffering from significant symptomatology, they can still function at a relatively adaptive level in their everyday life. It is probable that this outpatient clinical sample, which is often characterized by mild to moderate levels of emotional distress, can be a potential explanation for such finding.

Question 2 – Magnitude and Source of Reported Interpersonal Problems (Conscious)

Similar to prior empirical findings (Alden & Phillips, 1990; Horowitz et al., 1988; Pincus & Wiggins, 1990; Puschner, Kraft, & Bauer, 2004) the current findings also indicated that on the average, individuals who seek psychotherapy suffer from greater magnitude of interpersonal problems and difficulties than individuals who do not seek psychotherapy. These findings are specifically important for better understanding of individuals who seek outpatient psychotherapy. They indicate that the magnitude of

interpersonal problems is a valid and important marker of emotional distress, not only in patients suffering from severe psychopathology but also in patients with mild to moderate degrees of psychopathology. In addition, the findings point out that these individuals experience greater degree of distress originating from excessive connectedness and dependency in their interpersonal relationships, complemented by a significant sense of lacking agency, initiative, and control in these relationships.

Question 3 - Quality of internalized object-relations (representational level)

In regard to the question of quality of object-relations functioning and aspects of unconscious representations of self and others, the current findings are indicative of substantial qualitative differences between individuals who seek outpatient psychotherapy and those who do not. In general, the current findings are congruent with prior empirical findings regarding significant deficits in object-relations functioning in clinical samples (Exner, 2003; Huprich & Greenberg, 20003; Lerner, 2006; Stricker & Gooen-Piels, 2004; Weiner, 2003).

With regard to the capacity to flexibly sustain interpersonal interest, involvement, and comfort within relationships, the current findings indicate that both individuals who seek outpatient psychotherapy and those who do not have a similar level of interest and involvement in relationships with other people. Although both groups reflected adaptive levels of relational interest and involvement, individuals who seek outpatient psychotherapy seem to have a greater degree of interest in other people, while those who do not seek psychotherapy showed a mild tendency to be less socially involved. A

possible interpretation of this result is that for people who seek psychotherapy such level of relational interest actually reflects interpersonal preoccupation, which is rooted in their increased magnitude of interpersonal problems and deficits. In other words, these individuals tend to be more consumed and preoccupied by the nature of their interpersonal life than individuals who do not seek psychotherapy, simply because they tend to have more difficulties in their relationships. And indeed, the results reflect that although having greater levels of interest and involvement with others, individuals who seek psychotherapy showed greater tendency for maladaptive and ineffective interpersonal behaviors when relating to others. In other words, while the motivation for being in relationships and the quantity of relationships do not seem to differ between those who seek outpatient psychotherapy and those who do not, the quality of the relationships differs significantly. Outpatients seem to have greater maladaptive and ineffective interpersonal capacities and subsequently relational problems in comparison to individuals who do not seek psychotherapy.

With regard to anticipating interpersonal intimacy and security within relationships, individuals who seek psychotherapy do not seem to differ significantly from those who do not seek psychotherapy. In other words, in individuals who seek outpatient psychotherapy, the felt need for closeness, relatedness, and emotional intimacy with others reflects an adaptive level of interpersonal functioning. Also, these individuals showed no evidence indicative of increased tendency to experience interpersonal hypervigilance, guardedness, or mistrust toward others.

An interesting pattern of findings was found in respect to the capacity to balance interpersonal collaboration and acquiescence with competitiveness and assertiveness

when relating to others. The findings point out that individuals who seek outpatient psychotherapy have an adaptive degree and quality of expectations that relationships will be positive and collaborative in nature. They did not differ from the non-patient sample in that aspect. Also, these individuals did not exhibit an increased and maladaptive tendency to assume a dependent, passive, or naïve stance in interpersonal relationships. On the other hand, it seems that for individuals who seek psychotherapy, the experience and use of interpersonal aggression within relationships is significantly different than for individuals who do not seek psychotherapy. Specifically, they seem to have an increased expectation that relationships will carry a form of competitiveness and aggressiveness, and have greater tendency to use intellectual authoritarianism as an interpersonal 'tactic' for dominating others and imposing their attitudes, needs, and wishes. Put together, these findings suggest that while having an adaptive capacity for positive and collaborative outlook on relationships, individuals who seek psychotherapy also tend to have an increased likelihood to expect and act aggressively in their relationships.

The findings indicate that individuals who seek outpatient psychotherapy seem to have an adaptive capacity for perceiving people and social situations in an accurate and empathic manner. Furthermore, they reflect similar levels of such capacity as individuals who do not seek psychotherapy. Nevertheless, at the same time they also seem to have the potential for experiencing major deficits and substantial impairment in their capacity to do so. In other words, although these individuals seem to be able to function interpersonally in an empathic and reflective manner, they also carry greater vulnerability for maladaptive functioning that can cause them decreased capacity for empathic

attunement to others, impaired understanding and inaccurate perceiving of others' internal states and needs. These form a major deficit in what is known as Theory Of Mind (ToM; Premack & Woodruff, 1978), Mentalizing (Morton, Frith, & Leslie, 1991), Reflective Functioning (RF; Fonagy & Target, 1997), Mind-Reading (Whiten, 1991), or Social-Intelligence (Baron-Cohen, Tager-Flusberg, & Cohen, 1994), all constructs that significantly overlap with the empathy. Deficits in such intrapsychic and interpersonal capacity are often associated with different forms of psychopathology (Baron-Cohen, Tager-Flusberg, & Cohen, 1994; Fonagy, Gergely, Jurist, & Target, 2002; Fonagy, Steele, Steele, Leigh, Kennedy, Mattoon, & Target, 1995), thus can substantially undermine social adjustment and quality of interpersonal relationships.

Further examining the intrapsychic and representational aspect of interpersonal functioning, the degree of complexity of self-other representations was explored while focusing on several object-relational aspects. In general, it was found that for individuals who seek psychotherapy, a greater range and repertoire of potential object-relational functioning (or patterns of relating) is available than for individuals who do not seek psychotherapy. Similar to what was described and interpreted earlier, individuals who seek psychotherapy seem to have a comparable level of adaptive internalized object-relations and representational functioning, leading to an adaptive potential for interpersonal relationships. Furthermore, they do not seem to differ on these dimensions from individuals who do not seek psychotherapy.

Although such findings may seem a healthy psychological marker and apparently contradict the prediction, a closer examination portrays a somewhat different picture.

Although there is an existing potential for an adaptive level of object-relational and interpersonal functioning, it is important to note that the overall degree of deficits in self-object differentiation and the impairments in the capacity for mutual and empathic object-relatedness were significantly higher in the psychotherapy patients. Furthermore, it seems like having a wider range of potential ways of relating to others does not necessarily equate to a greater amount of healthy and adaptive ways of relating. And indeed, individuals who seek outpatient psychotherapy seem to have a significantly higher degree of maladaptive internalized object-relations and disturbed levels of object-relational functioning, thus predisposing them to a higher frequency of maladaptive and ineffective interpersonal relating. Beyond the range and quality, when examining the most likely and preferred internalized pattern of relating to others, individuals who seek psychotherapy exhibited significantly more disturbed and maladaptive habitual modes of object-relational functioning than individuals who do not seek psychotherapy.

General Conclusions of the Study

When individuals are asked about the elements that make their lives meaningful, satisfying, and are at the center of their existence, most individuals spontaneously mention their close, intimate relationships with others (Klinger, 1977; Simpson & Tran, 2006). They stress how stable and satisfying relationships constitute core ingredient in their capacity to enjoy and maintain happiness and well-being (Berscheid & Peplau, 1983; Cohen, Gottlieb, & Underwood, 2000; Myers, 1999; Ryff, 1995). As such, deficits in one's capacity to form and maintain interpersonal relationships have been continuously

shown to negatively impact both physical and psychological health and well-being (Segrin, 2001; Simpson & Tran, 2006).

The results of the current study are consistent with prior empirical findings and further substantiate such assertion, indicating the strong association between psychopathology and interpersonal problems and deficits. Also, the findings indicate that individuals who seek outpatient psychotherapy suffer from greater levels of general psychological distress and psychopathology, along with a greater amount of problems and deficits in their interpersonal relationships. These problems and deficits were reflected both in their conscious sense of their interpersonal problems, along with underlying deficits in object-relations functioning. These deficits were reflected in decreased degrees of separation and differentiation in their self-other representations, along with greater sense of malevolence and aggressiveness in their internalized view of relationships and modes of relating to others. Such object-relations deficits increase the likelihood of maladaptive interpersonal functioning and behaviors when interacting with others in the world, along with increasing the vulnerability to the development of psychopathology.

Blatt & Shichman (1983) and Blatt & Blass (1990) conceptualized normal personality development as a dialectical process between two developmental lines, a relational one and a second that is focused on identity. Balancing the capacity to form mature relationships along with the gradual formation of a differentiated and integrated sense of self and identity, is key to adaptive personality and interpersonal functioning. The current findings highlight such a view of adaptive functioning, since the current clinical sample was found to experience significant imbalance in both their sense of

having excess dependency on others, while at the same time lacking an adequate sense of agency and control in their relationships. On the representational and object-relations level of analysis, these individuals seem to experience such imbalance in terms of their predominantly malevolent and negative affective tone in regard to self-other relationships, and a lower degree of differentiation and mutuality between representations of self and other.

The current findings also carry meaning for the clinical setting, when working with both assessment and psychotherapy patients. Foremost, the findings further substantiate the importance of using several measures when conducting an initial assessment of a patient's emotional status and personality dynamics, some of these aimed at the reported level of experience while others at the unconscious representational level.

Utilizing a multi-method and multi-level approach in a clinical setting may increase the reliability of the findings, along with enabling a more comprehensive and complex understanding of the patient's unique constellation of personality dynamics with an emphasis on object-relations functioning, degree and nature of psychopathology, and their interaction with the patient's quality and quantity of interpersonal functioning. The current findings re-emphasize the inseparable link between having a greater degree of psychopathology and experiencing a greater magnitude of interpersonal problems and deficits (Horowitz, 2004; Horowitz et al., 1988; Segrin, 2001). Yet more than this, the current findings add the dimension of object-relations functioning, supporting the notion that individuals who suffer from greater degrees of psychopathology also tend to experience greater affective and structural deficits in their unconscious representations of self and others. As such, these findings indicate that when clinicians assess the degree

and quality of psychopathology and interpersonal functioning, it is important not only to focus on patients' repertoire of ways of relating and their adaptive modes of being related, but also to be especially sensitive to the maladaptive qualities of their interpersonal functioning. The current findings suggest that these may carry greater diagnostic value in determining underlying psychopathology.

Two examples for that would be tapping a patient's degree of malevolence in her or his interpersonal relationships as reflected in projective testing, and being sensitive not only to the magnitude of interpersonal difficulties a patient reports of but also the source of it (more issues of dependency and relatedness or more issues of agency and sense of control). Within psychotherapy, tracking a patient's quantity of interpersonal problems and quality of object-relations functioning seem to carry greater value as an indicator of the change process. This might be especially valuable when putting greater emphasis on a patient's maladaptive potential for relating rather than the adaptive. Also, having a more thorough and multi-dimensional understanding of a patient's underlying patterns and qualities of experiencing relatedness carries meaning with regard to the type of therapeutic work that is needed to be focused upon in psychotherapy.

Another conclusion pointed out by the current findings is the importance of differentiating between a patient's presenting problem (and corresponding diagnosis), and the underlying interpersonal problems and deficits that can often serve as an etiological factor or as a consequence of the diagnosed problem. Table A-25 (Appendix) presents the distribution of diagnoses for 32 patients in the clinical sample (N=40), for which a DSM-IV-TR diagnosis could be retrieved. For some of the patients in the sample, the diagnosis reflected a predominantly educational or attentional difficulty (e.g., ADHD).

Nevertheless, it is important to note that often, even for patients who are diagnosed with a circumscribed clinical entity that has no apparent relational component to it, their deficits can often cause or influence their relationships and interpersonal functioning. Thus, even with patients who do not present at first with a specific relational problem which they perceive as figural to their distress, the process of psychotherapy can very often lead to an explorative emphasis on the interpersonal aspect in addition to other aspects of functioning. One example would be a student who suffers from attentional or learning deficits. When working in psychotherapy these specific difficulties will be addressed and explored not only with regard to their effect on the patient's academic aptitude, but also in regard to their consequential effect on the interpersonal world, such as the extent of rejection by peers and sense of social isolation.

Limitations of the current study and future recommendations

The current study has several methodological limitations, consequently decreasing the external validity of the findings and necessitating caution in interpretation. First, using an outpatient sample means most of the clinical sample consisted of mild to moderate levels of psychopathology. Table A-25 (Appendix) presents the distribution of diagnoses for 32 patients in the clinical sample (N=40), for which a DSM-IV-TR diagnosis could be retrieved. A severe form of psychopathology (Bipolar Disorder) was diagnosed only in two patients (6.3%), while the other patients were diagnosed with mild to moderate degree of psychopathology. While the significant differences between this specific clinical sample and the non-patient sample point to the statistical power of the

study, the question of generalizability still exists. In other words, are the significant differences found in the current study applicable to other groups of patients who suffer from greater degrees of emotional distress and psychopathology? Although it may be logical and theoretically-sound to assume one way or another, further empirical investigation needs to be carried out to explore it.

A second limitation of the current study was the use of a clinical sample in a university-based clinic and a comparison group of non-patients who are composed of undergraduate college students. As such, the question concerning the actual differences between the samples exists. Since a certain percentage of the clinical sample in the current setting are students, often being higher in intellectual capacities and coping resources, their designation as a truly clinical sample is somewhat problematic. Furthermore, the distinction between students who seek psychotherapy and those who do not is not clear as well in terms of the magnitude and nature of emotional problems and deficits. It is more than probable and safe to assume that many students who are experiencing emotional distress and psychopathology do not ask for psychological treatment, yet still do not qualify for a normal or comparison group. They may have been sampled in the comparison group in the current study, consequently biasing the results. A future recommendation would be to screen the comparison group, either during the data collection phase or later when analyzing the data.

A third limitation and subsequent recommendation regards the sample size in the current study. Although most of the predictions were statistically significant, an increase in sample size, along with the inclusion of another group, may further clarify some of the quantitative and qualitative aspects of interpersonal functioning in psychopathology in a

patient sample. Specifically, dividing the clinical sample into two samples, differentiated by degree of psychopathology may help reveal more subtle patterns. At the same time, including a second non-patient sample, consisting of individuals from the community might reveal different patterns and differences as well than when using a relatively narrowed-range (e.g., intelligence) sample of college students.

The current samples significantly differed in the range of age, thus age had to be statistically controlled as a covariate. Another future recommendation is to sample a more representative range of individuals, thus controlling for potential age differences via the design and not statistically. Such an approach can potentially increase the statistical power to detect differences between the groups, consequently enabling greater explanatory power and external validity when interpreting the results.

Another statistical limitation in the current study has to do with the use of several dependent variables that are categorical. Using these variables could have caused the loss of statistical power to detect potential differences between the clinical and non-patient groups. Also, due to the nature of non-parametric statistical analysis, age could not be covaried with these dependent variables, thus its effect could not be controlled for. It is recommended that when possible, future studies will translate these categorical variables into continuous variables, thus add dimensionality to the data along with statistical power to detect significance. If not possible to employ fully continuous variables, adding additional categories to each variable might help detect differences, thus add richness to the interpretation of the results.

A question that came up in the course of conducting the current study and is still left open, concerns the nature of the relationship between the ways individuals

consciously experience their interpersonal problems, their unconscious object-relations, and their interpersonal functioning. Putting it in methodological terms, what is the relationship between self-report and projective measures in regard to interpersonal functioning, and their relative role in predicting one's actual quality and quantity of interpersonal relationships. This is an important question to investigate in future research.

And last, the current study included men and women together in the analysis. While ecologically valid in the real world, such an approach inherently carries a potential for masking naturally existing differences between the genders, which are only logical to assume when one considers the inherent differences between the genders in various aspects of psychological and interpersonal functioning. Analyzing the data while differentiating between the genders can potentially reveal unique patterns, problems, and deficits for women and men. Highlighting such potentially unique differences is important for better understanding the special needs of men and women in regard to planning and providing preventative, on-going, and crisis-based psychological interventions.

Berscheid & Peplau (1983) asserted that "Relationships with others lie at the very core of human existence. Humans are conceived within relationships, born into relationships, and live their lives within relationships. Each individual's dependence on other people – for the realization of life itself, for survival during one of the longest gestation periods in the animal kingdom, for food and shelter and aid and comfort throughout the life cycle – is a fundamental fact of the human condition." (p.1). Indeed, the current study further emphasizes such a notion of the interdependence among people,

extending it beyond the normal and adaptive sphere of functioning into the reciprocal effect relationships and emotional distress have.

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APPENDIX

Table A-1. kappa (κ) Coefficients for Rorschach variables

Variable	kappa Value
Location	.88
Developmental Quality (DQ)	.82
Form	.91
Form Quality (FQ)	.75
Movement	.98
Active/Passive	.95
Color	.92
Achromatic Color	.89
Diffuse Shading	.83
Vista	.72
Texture	1.00
Reflection	.82
Form Dimension	.83
Pairs	.85
Populars	.97
Overall Mean kappa (κ)	**.87**

Table A-2. Descriptive Statistics for Age and Educational Level

	Group	N	Mean	Std. Deviation	Std. Error Mean
AGE	Normative	40	21.0500	5.74211	.90791
	Clinical	40	30.6500	10.04745	1.58864
Educational level	Normative	40	13.6000	.84124	.13301
	Clinical	40	13.3000	2.22111	.35119

Table A-3. Independent Samples Test for Age and Educational Level

		Levene's Test for Equality of Variances		t-test for Equality of Means				
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
AGE	Equal variances assumed	12.807	.001	-5.247	78	.000	-9.60000	1.82978
	Equal variances not assumed			-5.247	62.020	.000	-9.60000	1.82978
Educational level	Equal variances assumed	25.931	.000	.799	78	.427	.30000	.37553
	Equal variances not assumed			.799	49.964	.428	.30000	.37553

Table A-4. Chi-Square Test for Gender

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Group * Gender	80	100.0%	0	.0%	80	100.0%

Group * Gender Crosstabulation

			Gender		
			Male	Female	Total
Group	Normative	Count	9	31	40
		Expected Count	11.0	29.0	40.0
		% within Group	22.5%	77.5%	100.0%
		% within Gender	40.9%	53.4%	50.0%
		% of Total	11.3%	38.8%	50.0%
	Clinical	Count	13	27	40
		Expected Count	11.0	29.0	40.0
		% within Group	32.5%	67.5%	100.0%
		% within Gender	59.1%	46.6%	50.0%
		% of Total	16.3%	33.8%	50.0%
Total		Count	22	58	80
		Expected Count	22.0	58.0	80.0
		% within Group	27.5%	72.5%	100.0%
		% within Gender	100.0%	100.0%	100.0%
		% of Total	27.5%	72.5%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	1.003[b]	1	.317		
Continuity Correction[a]	.564	1	.453		
Likelihood Ratio	1.007	1	.316		
Fisher's Exact Test				.453	.227
Linear-by-Linear Association	.991	1	.320		
N of Valid Cases	80				

a. Computed only for a 2x2 table

b. 0 cells (.0%) have expected count less than 5. The minimum expected count is 11. 00.

Table A-5. Descriptive Statistics for SCL-90-R GSI ANCOVA

Dependent Variable: SCL90 Global Severity Index

Group	Mean	Std. Deviation	N
Normative	73.3750	44.38046	40
Clinical	110.8500	47.96984	40
Total	92.1125	49.63742	80

Table A-6. Tests of Between-Subjects Effects for SCL-90-R GSI

Dependent Variable: SCL90 Global Severity Index

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	30925.662[a]	2	15462.831	7.272	.001
Intercept	38004.830	1	38004.830	17.874	.000
AGE	2838.150	1	2838.150	1.335	.252
Group	13660.405	1	13660.405	6.425	.013
Error	163720.325	77	2126.238		
Total	873423.000	80			
Corrected Total	194645.988	79			

a. R Squared = .159 (Adjusted R Squared = .137)

Table A-7. Mann-Whitney Test for CDI, HVI, S-CON, and DEPI

Ranks

	Group	N	Mean Rank	Sum of Ranks
CDI	Normative	40	42.50	1700.00
	Clinical	40	38.50	1540.00
	Total	80		
HVI	Normative	40	38.00	1520.00
	Clinical	40	43.00	1720.00
	Total	80	43.00	
Suicidal Constellation	Normative	40	36.50	1460.00
	Clinical	40	44.50	1780.00
	Total	80		
Depressive Index	Normative	40	35.00	1400.00
	Clinical	40	46.00	1840.00
	Total	80		

Test Statistics[a]

	CDI	HVI	Suicidal Constellation	Depressive Index
Mann-Whitney U	720.000	700.000	640.000	580.000
Wilcoxon W	1540.000	1520.000	1460.000	1400.000
Z	-.949	-1.506	-2.489	-2.445
Asymp. Sig. (2-tailed)	.343	.132	.013	.014

a. Grouping Variable: Group

Table A-8. Descriptive Statistics for WSum6 ANCOVA

Dependent Variable: Weighted Sum Special Scores

Group	Mean	Std. Deviation	N
Normative	7.3500	8.01457	40
Clinical	15.5250	16.13562	40
Total	11.4375	13.31017	80

Table A-9. Tests of Between-Subjects Effects for WSum6

Dependent Variable: Weighted Sum Special Scores

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	1421.702[a]	2	710.851	4.353	.016
Intercept	471.582	1	471.582	2.888	.093
AGE	85.089	1	85.089	.521	.473
Group	713.993	1	713.993	4.372	.040
Error	12573.986	77	163.299		
Total	24461.000	80			
Corrected Total	13995.688	79			

a. R Squared = .102 (Adjusted R Squared = .078)

Table A-10. Descriptive Statistics for IIP32 Total Score, Communion, and Agency Subscales ANCOVA

	Group	Mean	Std. Deviation	N
IIP32 Total Score	Normative	30.7000	17.84865	40
	Clinical	42.9750	18.95540	40
	Total	36.8375	19.30793	80
IIP32 Communiun Subscale	Normative	1.1450	9.01554	40
	Clinical	6.0825	9.29196	40
	Total	3.6138	9.42980	80
IIP32 Agency Subscale	Normative	-1.9000	6.38685	40
	Clinical	-6.8475	11.16894	40
	Total	-4.3738	9.37644	80

Table A-11. Tests of Between-Subjects Effects for IIP32 Total Score, Communion, and Agency Subscales

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	IIP32 Total Score	3061.330[a]	2	1530.665	4.466	.015
	IIP32 Communiun Subscale	528.468[b]	2	264.234	3.132	.049
	IIP32 Agency Subscale	510.905[c]	2	255.453	3.057	.053
Intercept	IIP32 Total Score	11003.728	1	11003.728	32.107	.000
	IIP32 Communiun Subscale	247.949	1	247.949	2.939	.090
	IIP32 Agency Subscale	258.608	1	258.608	3.095	.083
AGE	IIP32 Total Score	47.817	1	47.817	.140	.710
	IIP32 Communiun Subscale	40.890	1	40.890	.485	.488
	IIP32 Agency Subscale	21.350	1	21.350	.255	.615
Group	IIP32 Total Score	2573.283	1	2573.283	7.508	.008
	IIP32 Communiun Subscale	495.061	1	495.061	5.868	.018
	IIP32 Agency Subscale	457.208	1	457.208	5.471	.022
Error	IIP32 Total Score	26389.558	77	342.722		
	IIP32 Communiun Subscale	6496.307	77	84.368		
	IIP32 Agency Subscale	6434.589	77	83.566		
Total	IIP32 Total Score	138011.000	80			
	IIP32 Communiun Subscale	8069.510	80			
	IIP32 Agency Subscale	8475.870	80			
Corrected Total	IIP32 Total Score	29450.888	79			
	IIP32 Communiun Subscale	7024.775	79			
	IIP32 Agency Subscale	6945.495	79			

a. R Squared = .104 (Adjusted R Squared = .081)

b. R Squared = .075 (Adjusted R Squared = .051)

c. R Squared = .074 (Adjusted R Squared = .049)

Table A-12. Descriptive Statistics for SumH and ISOL MANCOVA

	Group	Mean	Std. Deviation	N
Sum_H	Normative	5.0250	1.92803	40
	Clinical	7.2250	4.02229	40
	Total	6.1250	3.32377	80
Isolation Index	Normative	.2473	.16550	40
	Clinical	.1515	.09564	40
	Total	.1994	.14268	80

Table A-13. Tests of Between-Subjects Effects for SumH and ISOL

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	Sum_H	104.917[a]	2	52.458	5.261	.007
	Isolation Index	.208[b]	2	.104	5.720	.005
Intercept	Sum_H	363.415	1	363.415	36.444	.000
	Isolation Index	.465	1	.465	25.575	.000
AGE	Sum_H	8.117	1	8.117	.814	.370
	Isolation Index	.025	1	.025	1.357	.248
Group	Sum_H	98.284	1	98.284	9.856	.002
	Isolation Index	.083	1	.083	4.558	.036
Error	Sum_H	767.833	77	9.972		
	Isolation Index	1.400	77	.018		
Total	Sum_H	3874.000	80			
	Isolation Index	4.788	80			
Corrected Total	Sum_H	872.750	79			
	Isolation Index	1.608	79			

a. R Squared = .120 (Adjusted R Squared = .097)

b. R Squared = .129 (Adjusted R Squared = .107)

Table A-14. Mann-Whitney Test for H:[Hd+(H)+(Hd)], GHR:PHR, and CDI

Ranks

	Group	N	Mean Rank	Sum of Ranks
H : (H) + Hd + (Hd)	Normative	40	37.50	1500.00
	Clinical	40	43.50	1740.00
	Total	80		
GHR:PHR	Normative	40	34.50	1380.00
	Clinical	40	46.50	1860.00
	Total	80		
CDI	Normative	40	42.50	1700.00
	Clinical	40	38.50	1540.00
	Total	80		

Test Statistics[a]

	H : (H) + Hd + (Hd)	GHR:PHR	CDI
Mann-Whitney U	680.000	560.000	720.000
Wilcoxon W	1500.000	1380.000	1540.000
Z	-1.377	-2.680	-.949
Asymp. Sig. (2-tailed)	.169	.007	.343

a. Grouping Variable: Group

Table A-15. Descriptive Statistics for SumT ANCOVA

Dependent Variable: Sum_T

Group	Mean	Std. Deviation	N
Normative	.3500	.53349	40
Clinical	1.0750	1.59144	40
Total	.7125	1.23446	80

Table A-16. Tests of Between-Subjects Effects for SumT

Dependent Variable: Sum_T

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	15.015[a]	2	7.507	5.486	.006
Intercept	.015	1	.015	.011	.916
AGE	4.502	1	4.502	3.290	.074
Group	2.903	1	2.903	2.121	.149
Error	105.373	77	1.368		
Total	161.000	80			
Corrected Total	120.388	79			

a. R Squared = .125 (Adjusted R Squared = .102)

Table A-17. Mann-Whitney Test for HVI

Ranks

	Group	N	Mean Rank	Sum of Ranks
HVI	Normative	40	38.00	1520.00
	Clinical	40	43.00	1720.00
	Total	80		

Test Statistics[a]

	HVI
Mann-Whitney U	700.000
Wilcoxon W	1520.000
Z	-1.506
Asymp. Sig. (2-tailed)	.132

a. Grouping Variable: Group

Table A-18. Descriptive Statistics for COP, AG, PER, and fd MANCOVA

	Group	Mean	Std. Deviation	N
COP	Normative	1.0500	1.10824	40
	Clinical	1.5500	1.50128	40
	Total	1.3000	1.33502	80
AG	Normative	.6500	.83359	40
	Clinical	1.1750	1.56709	40
	Total	.9125	1.27482	80
Personal	Normative	.3250	.57233	40
	Clinical	1.0750	1.54235	40
	Total	.7000	1.21593	80
Food	Normative	.1750	.50064	40
	Clinical	.2000	.46410	40
	Total	.1875	.47981	80

Table A-19. Tests of Between-Subjects Effects for COP, AG, PER, and fd

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	COP	5.676[a]	2	2.838	1.617	.205
	AG	6.529[b]	2	3.264	2.063	.134
	Personal	11.594[c]	2	5.797	4.243	.018
	Food	.048[d]	2	.024	.101	.904
Intercept	COP	18.092	1	18.092	10.310	.002
	AG	11.540	1	11.540	7.292	.009
	Personal	1.711	1	1.711	1.252	.267
	Food	.461	1	.461	1.959	.166
AGE	COP	.676	1	.676	.385	.537
	AG	1.016	1	1.016	.642	.425
	Personal	.344	1	.344	.252	.617
	Food	.035	1	.035	.149	.700
Group	COP	5.486	1	5.486	3.126	.081
	AG	6.418	1	6.418	4.055	.048
	Personal	6.677	1	6.677	4.887	.030
	Food	.037	1	.037	.156	.694
Error	COP	135.124	77	1.755		
	AG	121.859	77	1.583		
	Personal	105.206	77	1.366		
	Food	18.140	77	.236		
Total	COP	276.000	80			
	AG	195.000	80			
	Personal	156.000	80			
	Food	21.000	80			
Corrected Total	COP	140.800	79			
	AG	128.388	79			
	Personal	116.800	79			
	Food	18.188	79			

a. R Squared = .040 (Adjusted R Squared = .015)

b. R Squared = .051 (Adjusted R Squared = .026)

c. R Squared = .099 (Adjusted R Squared = .076)

d. R Squared = .003 (Adjusted R Squared = -.023)

Table A-20. Mann-Whitney Test for a:p

Ranks

	Group	N	Mean Rank	Sum of Ranks
a:p	Normative	40	38.50	1540.00
	Clinical	40	42.50	1700.00
	Total	80		

Test Statistics[a]

	a:p
Mann-Whitney U	720.000
Wilcoxon W	1540.000
Z	-.995
Asymp. Sig. (2-tailed)	.320

a. Grouping Variable: Group

Table A-21. Descriptive Statistics for Accurate M and Inaccurate M MANCOVA

	Group	Mean	Std. Deviation	N
Accurate M (o;u;+)	Normative	2.7250	1.66391	40
	Clinical	3.6750	2.36846	40
	Total	3.2000	2.08915	80
Inaccurate M (-/none)	Normative	.6000	.74421	40
	Clinical	1.3250	1.70049	40
	Total	.9625	1.35426	80

Table A-22. Tests of Between-Subjects Effects for Accurate M and Inaccurate M

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	Accurate M (o;u;+)	26.333[a]	2	13.167	3.183	.047
	Inaccurate M (-/none)	17.618[b]	2	8.809	5.330	.007
Intercept	Accurate M (o;u;+)	127.374	1	127.374	30.797	.000
	Inaccurate M (-/none)	26.139	1	26.139	15.815	.000
AGE	Accurate M (o;u;+)	8.283	1	8.283	2.003	.161
	Inaccurate M (-/none)	7.106	1	7.106	4.299	.041
Group	Accurate M (o;u;+)	26.241	1	26.241	6.345	.014
	Inaccurate M (-/none)	17.214	1	17.214	10.415	.002
Error	Accurate M (o;u;+)	318.467	77	4.136		
	Inaccurate M (-/none)	127.269	77	1.653		
Total	Accurate M (o;u;+)	1164.000	80			
	Inaccurate M (-/none)	219.000	80			
Corrected Total	Accurate M (o;u;+)	344.800	79			
	Inaccurate M (-/none)	144.888	79			

a. R Squared = .076 (Adjusted R Squared = .052)

b. R Squared = .122 (Adjusted R Squared = .099)

Table A-23. Descriptive Statistics for MOAS Variables MANCOVA

	Group	Mean	Std. Deviation	N
MOA_Sum	Normative	9.6750	6.09913	40
	Clinical	16.4750	14.46833	40
	Total	13.0750	11.55041	80
MOA_Total_L	Normative	3.7000	1.72760	40
	Clinical	4.3500	2.71322	40
	Total	4.0250	2.28354	80
MOA_Total_H	Normative	.4750	.87669	40
	Clinical	1.6000	2.35121	40
	Total	1.0375	1.85174	80
MOA_Mean	Normative	2.1475	.70320	40
	Clinical	2.4773	.80395	40
	Total	2.3124	.76858	80
MOA_Highest	Normative	3.2000	1.57219	40
	Clinical	4.1250	1.82837	40
	Total	3.6625	1.75704	80
MOA_Lowest	Normative	1.3500	.48305	40
	Clinical	1.4750	.84694	40
	Total	1.4125	.68794	80
MOA_Range	Normative	1.9000	1.62985	40
	Clinical	2.8000	1.89737	40
	Total	2.3500	1.81485	80

Table A-24. Tests of Between-Subjects Effects for MOAS Variables

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	MOA_Sum	1102.613[a]	2	551.307	4.498	.014
	MOA_Total_L	20.084[b]	2	10.042	1.973	.146
	MOA_Total_H	27.365[c]	2	13.683	4.326	.017
	MOA_Mean	3.075[d]	2	1.538	2.716	.072
	MOA_Highest	25.770[e]	2	12.885	4.549	.014
	MOA_Lowest	1.360[f]	2	.680	1.453	.240
	MOA_Range	24.452[g]	2	12.226	3.993	.022
Intercept	MOA_Sum	2267.398	1	2267.398	18.501	.000
	MOA_Total_L	195.886	1	195.886	38.491	.000
	MOA_Total_H	17.107	1	17.107	5.409	.023
	MOA_Mean	50.073	1	50.073	88.448	.000
	MOA_Highest	158.296	1	158.296	55.882	.000
	MOA_Lowest	7.798	1	7.798	16.667	.000
	MOA_Range	81.226	1	81.226	26.530	.000
AGE	MOA_Sum	177.813	1	177.813	1.451	.232
	MOA_Total_L	11.634	1	11.634	2.286	.135
	MOA_Total_H	2.053	1	2.053	.649	.423
	MOA_Mean	.901	1	.901	1.591	.211
	MOA_Highest	8.658	1	8.658	3.056	.084
	MOA_Lowest	1.047	1	1.047	2.238	.139
	MOA_Range	8.252	1	8.252	2.695	.105
Group	MOA_Sum	1086.070	1	1086.070	8.862	.004
	MOA_Total_L	17.988	1	17.988	3.534	.064
	MOA_Total_H	25.576	1	25.576	8.087	.006
	MOA_Mean	3.071	1	3.071	5.425	.022
	MOA_Highest	25.597	1	25.597	9.036	.004
	MOA_Lowest	.002	1	.002	.004	.951
	MOA_Range	24.280	1	24.280	7.930	.006
Error	MOA_Sum	9436.937	77	122.558		
	MOA_Total_L	391.866	77	5.089		
	MOA_Total_H	243.522	77	3.163		
	MOA_Mean	43.592	77	.566		
	MOA_Highest	218.117	77	2.833		
	MOA_Lowest	36.028	77	.468		
	MOA_Range	235.748	77	3.062		
Total	MOA_Sum	24216.000	80			
	MOA_Total_L	1708.000	80			
	MOA_Total_H	357.000	80			
	MOA_Mean	474.433	80			
	MOA_Highest	1317.000	80			
	MOA_Lowest	197.000	80			
	MOA_Range	702.000	80			
Corrected Total	MOA_Sum	10539.550	79			
	MOA_Total_L	411.950	79			
	MOA_Total_H	270.888	79			
	MOA_Mean	46.667	79			
	MOA_Highest	243.888	79			
	MOA_Lowest	37.388	79			
	MOA_Range	260.200	79			

a. R Squared = .105 (Adjusted R Squared = .081)
b. R Squared = .049 (Adjusted R Squared = .024)
c. R Squared = .101 (Adjusted R Squared = .078)
d. R Squared = .066 (Adjusted R Squared = .042)
e. R Squared = .106 (Adjusted R Squared = .082)
f. R Squared = .036 (Adjusted R Squared = .011)
g. R Squared = .094 (Adjusted R Squared = .070)

Table A-25. Distribution of Diagnoses for the Clinical Sample[12]

Diagnosis	Frequency
Adjustment Disorder	4
Major Depressive Disorder	6
Dysthymic Disorder	5
Depressive Disorder NOS	2
Bipolar Disorder	2
Social Anxiety Disorder	2
Generalized Anxiety Disorder	2
Post Traumatic Stress Disorder	5
Specific Phobia, Test Anxiety	3
ADD/ADHD	3
Learning Disorders	10
Expressive Language Disorder	1
Disorder of Written Language	1
Somatization Disorder	1
Undifferentiated Somatoform Disorder	1
Substance Abuse	1
Sleep Terror Disorder	1
Histrionic Personality Disorder	1
Narcissistic Personality Disorder	1
Schizoid Personality Disorder	1
Borderline Personality Disorder	1
Personality Disorder NOS	2
VCode – Academic Disorder	2
VCode – Partner Relational Problem	2
VCode – Parent-Child Relational Problem	1
VCode – Relational Problem NOS	2

[1] Each patient can have more than one diagnosis assigned
[2] Only for 32 out of the 40 patients in the clinical sample a DSM-IV-TR diagnosis was retrieved

VITA

Guy M. Edlis was born and raised in Haifa, Israel. He served in the Israeli Defense Forces for three years of regular service as a medic, medical instructor, and a member of the Medical Core Research and Development Team. In his reserve military service, Guy serves as a mental health officer. He graduated in 1998 with a Bachelor's Degree in Social Work from the University of Haifa, a Bachelor's degree in Psychology from the University of Haifa in 2000, and a Master's degree in Clinical Psychology from Tel-Aviv University in 2003. Guy enrolled in the PhD Clinical Psychology program at the University of Tennessee Knoxville in 2003, and is currently preparing to leave for his pre-doctoral internship at the Cambridge Hospital/Harvard Medical School in Cambridge, MA.

Within psychology, Guy is mostly interested in long-term individual and group psychotherapy, psychological assessment and the integration of objective and projective measures, Therapeutic Assessment paradigm, and the bridging of psychoanalysis, attachment theory, and developmental psychopathology.

Outside psychology, Guy enjoys outdoor activities such as hiking and mountain biking, along with photography and cooking.