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Melissa Goldberg April 17, 2011

Social Cognition and Object Relations in Adolescents: Associations with Adaptive Functioning and Personality Pathology

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Abstract

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The Social Cognition and Object Relations Scale (SCORS) is a measure applied to relational narrative data to assess information about an individual's self/other representations and interpersonal functioning. While an abundance of research has used the SCORS to assess adult psychopathology and treatment response, less work has focused on adolescents. This study aims to evaluate the developmental stability of social cognition and object relations across early and late-stage adolescents in a clinical sample, its relationship to personality pathology and adaptive functioning, and whether this construct and measure provide incremental validity over personality disorder diagnosis and age in predicting multiple domains of adaptive functioning. SCORS scales exhibited developmental growth across age groups, showed significantly more pathology in adolescents with diagnosable personality pathology, and predicted domains of adaptive functioning above and beyond age and DSM-IV personality disorder diagnosis. These findings suggest that social cognition and object relations constitute aspects of personality crucial to adaptive functioning that are related to but not fully captured by personality disorder diagnosis.

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The Personality and Personality Disorders Work Group for DSM-5 has recently proposed a major reformulation of the diagnostic approach to personality disorders (PDs) (Skodol et al., 2011). Central to the proposed revision is a major change in the definition and general criteria for a personality disorder. Whereas the DSM-IV (American Psychiatric Association, 2000) definition described atheoretical criteria related to enduring and deviant patterns of inner experience and outward behavior, the proposed DSM-5 general definition aims to highlight "a broad failure to develop important personality structures and capacities needed for adaptive functioning" (Skodol, et al., 2011). This revised definition hinges on adaptive failures in the domains of self-identity and interpersonal functioning. The role in personality pathology of disrupted internal representations combined with impaired relatedness to others emerges directly from theoretical and empirical work on social-cognition and object relations perspectives (Andersen & Chen, 2002; Andersen & Cole, 1990; Benjamin, 1996; Bowlby, 1969; Kernberg, 1984; Livesley, 1998; Rutter, 1987). The Social Cognition and Object Relations Scale (SCORS; Stein et al., 2011; Westen, 1995) is one measure the Work Group has highlighted as useful for assessing the problems with self-representations and interpersonal relationships characteristic of personality pathology.

While an abundance of research has focused on SCORS ratings from psychotherapy narratives of higher functioning or personality disordered adults to assess adult psychopathology and treatment response (Callahan, Price, & Hilsenroth, 2003; Peters et al., 2006; Porcerelli et al., 2007; Price et al., 2004; Stein et al., in press), the measure has been less frequently applied to adolescent psychotherapy narratives, with the exception of a few individual case studies (Bambery & Porcerelli, 2006; Porcerelli, Cogan, & Bambery, 2011). Because adolescence is a time of great developmental growth (Blakemore, Burnett, & Dahl, 2010), as well as a crucial

period when the emergence or presence of personality pathology signals great risk for severe and enduring problems into adulthood (e.g., Westen, Betan, & DeFife, 2011), the field of adolescent psychology could greatly benefit from more research on social cognition and object relations.

After a basic review of object relations and social-cognitive theories as related to adolescents, we examine the application of the SCORS to an adolescent clinical population. Specifically, we will be evaluating whether social cognition and object relations predict adaptive functioning, and whether they can do so under statistically stringent conditions, such as holding constant age and PD diagnosis.

Object relations theory

Object relations theory emerged as an offshoot of Freud's original formulations of drive theory (the theory that, first and foremost, we seek sexual gratification) as well as his structural model of personality. Freud's structural model described three mental structures identified as the id (drives and impulses), superego (conscience and morality), and ego (reality-based self), with the ego having to "negotiate" ways of dealing with conflicts between id impulses and superego inhibitions. As both drive theory and the structural model focused solely on conflicts in internal mental events and processes, interest in object relations theory grew as the emphasis for explaining psychopathology shifted further away from these traditional "intrapsychic" psychoanalytic explanations and into the external world of interpersonal relationships, particularly in more troubled patients who today would be diagnosed with personality disorders (PDs). More specifically, object relations theorists differed from Freudian theorists in two major ways: first, they redefined the libido as seeking relationships instead of sexual gratification (i.e., we seek relationships first and foremost, of which only some aspects are sexual); next, they

focused on patients whose problems were not centered around conflicts between their wishes and conscience. These patients had problematic representations of themselves, others, and relationships that would lead to significant problems with regulating intense affects, trouble navigating interpersonal relationships, and problems maintaining stable and productive work relationships. Object relations theorists believed that psychopathology begins with repeated relational failures or mismatches between the child's needs and parental responses resulting in pathologically distorted perceptions of self and others (Wampold, 2010).

Fairbairn (1954) was among the first to explore the idea that "libido" is object-seeking rather than gratification-seeking. Here, the 'object' of object relations stands for a person that is the target- or object- of the subject's wishes, needs, and feelings. Individuals store mental representations of these objects as their relationships grow and expand over time. In essence, these are the memories and thoughts that the subject associates with the object. The relational aspect of object relations refers to the subject's interpersonal relationships and suggests that internal representations of past relationships (especially early ones) continuously influence one's current relations. Winnicott (1971/2005) identified the child's mother as the object central to success or failure of the infant's adaptive development. According to Winnicott, the mother-infant relationship is never perfectly gratifying, but a "good enough mother" begins with full commitment and attention to the infant's needs, and gradually draws away as time goes on. The implication is that without a "good enough mother", object-relational conflicts and psychopathology arise.

Object constancy is another example of how object relations theories inform understanding of psychopathology. Object constancy is "the capacity to recognize and tolerate loving and hostile feelings toward the same object; the capacity to keep feelings centered on a

specific object; and the capacity to value an object for attributes other than its function of satisfying needs" (Burgner & Edgcumbe, 1972, p. 328). The failure to reliably develop object constancy can result in dichotomous thinking or "splitting", understood as the inability to simultaneously recognize both positive and negative attributes in another. This 'splitting' is often common to patients with borderline personality disorder, or others who have problems with forming complex representations of others (Kernberg, 1989).

While object relations theories traditionally focus on the definition of objects as people (and even more narrowly, just the mothers), contemporary perspectives more broadly include the total of objects we interact with in the world (including people, places, *and* things) and how our internal representations of these objects affect our inner experiences and outward behaviors. Winnicott (1953) described children's attachments to their first treasured possessions, while Harlow and Zimmerman (1959) demonstrated non-human primate attachment to inanimate objects (i.e. wire versus cloth covered feeding apparatus) in absence of animate caregivers, and Bowlby (1969) catalogued numerous relational ties among nonhuman animals and people to different species or physical objects. A common developmental example would be the nature of a child's representations of his or her elementary school. While the school itself is an object (a building), all of the child's cognitive and emotional representations associated with the school are attached to a mental representation of the school as a physical object. This mental representation could include the comfortable familiarity of the school hallways, the smells of the cafeteria, and the combined sensory and emotional memories of one's experiences there. This mental representation is constructed around and associated with, for example, the information learned from the subjects that were studied, the fear of being made fun of by other students, the fondness for a certain teacher, and the intimacy with one's friends.

These object relations have important implications for the child's future functioning and relationships. The influence object relations has on functioning is wide; it impacts one's behaviors, emotions and relationships with others, through emphasizing early attachments and mental representations of the self, and other people, places and things.

Social cognition

While object relations theories emerged from clinical work and focused primarily on emotional processes and largely unconscious representations, social cognition research emerged from social and cognitive psychology, which focused on conscious information processing. At its most basic level, social cognition research evaluates how recalled social information affects ensuing information processing and behaviors. Bandura (1986) was among the first to examine psychosocial well being through a social-cognitive lens, and believed social cognition was essential to understanding both personal and interpersonal change.

In Markus's (1977) work on social cognition, she explains how schemas, which are organized knowledge structures, help people understand themselves and others. The amount of social stimulation individuals have to make sense of on a daily basis is too much to process, so to help retain important information, people utilize schemata. Markus examined the idea that explaining one's own behavior resulted in self-schemata, or self-generalizations. Markus found these judgments, shaped by an individual's past behaviors, help the individual to organize and make sense of self-related information, as well as enable one to make predictions about one's own behavior or maintain consistent schematic information about oneself.

Like other social cognition researchers, Markus described the way schemata apply to interpersonal relationships and perceptions of others, not just oneself. For example, when a

subject was given a qualitative description of a person, the subject would then encode information about this person, thus activating a schema (Markus & Zajonc, 1985). These social schemata can be useful for predicting others' behaviors. Well-developed social cognition skills are those that are capable of processing schemata in a mature and complex manner, and while social cognition researchers rarely develop the clinical implications of their work, they suggest that well-developed social cognition also increases social support and satisfaction (Markus & Zajonc, 1985; Sibley, Evans, & Serpell, 2010).

Measuring social cognition and object relations capacities with the SCORS.

Westen (1991b) argued that these two seemingly independent traditions were more related than would appear, and could be fruitfully integrated together to give an understanding of the cognitive and affective processes of interpersonal functioning and self-representations. Both traditions are interested in how mental representations of the self and other people (whether labeled as object representations or self/other schemas) develop and are related to thoughts, feelings, and behaviors. However, integration of the two models was necessary as object relations theory had primarily focused on unconscious aspects of representations and clinical implications, whereas social cognition research had a richer empirical tradition behind it.

Towards this end, Westen et al. developed the Social Cognition and Object Relations Scale (SCORS; Westen, 1991a) to assess several dimensions of social cognition and object relations. The scale is used for studying interpersonal functioning and self-representations and has eight scales designed to assess different but interrelated dimensions of object relations and social cognition. The earliest version of the SCORS involved detailed coding manuals for assessing and quantifying social cognitions and object relations capacities as expressed in narrative data such as early memories stories, responses to the Thematic Apperception Test

(TAT) (Murray, 1943), or patients' psychotherapy narratives. However, Westen and colleagues (Stein, et al., 2011; Westen, 1995) have also developed the currently utilized 8-scale version of the instrument for use by clinically expert observers to assess the same dimensions based on their experience with patients over the course of clinical practice or as assessed in a comprehensive clinical research interview in which patients provide narratives across multiple domains of functioning, particularly interpersonal functioning (Westen & Muderrisoglu, 2003).

The SCORS includes 8 scales: Affective Quality of Representations (shorthanded hereafter as "Affect," which refers to the emotional tone of expectations for others in their relationships, including the way they describe such relationships), Emotional Investment in Relationships (Relationships; evaluating the patient's capacity for intimacy in relationships), Experience and Management of Aggressive Impulses (Aggression; measuring the patient's ways of and ability to express and regulate anger in appropriate ways), and Self Esteem (the patient's affective experience of personal representations), Complexity of Representations of People (Complexity; the depth of the patient's representations of others), Understanding of Social Causality (Causality; the ability to tell a coherent narrative without distortion, incongruity, or unusual logic), Emotional Investment in Values and Moral Standards (Morals; the extent to which the patient has the cognitive and affective capacity to regulate his or her behavior based on moral standards of ethical conduct), and Identity and Coherence of Self (Identity; the ability to view the self in consistent ways and to maintain personal values, a coherent sense of life history, and long-term goals). Inter-rater reliability estimates across studies have generally been in the good to excellent range despite considerable differences in samples studied, levels of psychiatric distress, and type of narrative data used (Huprich & Greenberg, 2003). The reliability and

validity of the SCORS has been measured using the various forms of narrative data described above.

The SCORS is frequently applied to narrative data obtained from TAT administrations. TAT cards are designed to translate into rich and clinically-informed material about the respondent's interpersonal world. This means that the TAT can provide a unique insight into the individual not accessible by direct self-report or other measures. Through the depictions of the subjects' narratives, TAT stories offer source material for assessing cognitive and affective processes. In other words, the TAT stories that the subjects tell could inform therapists and researchers about subjects' representations of themselves and others in a manner unbiased by social desirability or distortions in self-perception.

We will review two forms of current research on SCORS; first, those articles that assess reliability and validity of the SCORS as rated by projective measures (like the TAT), as well as articles that suggest a developmental nature of SCORS, SCORS relations to adaptive functioning, the implications of SCORS on the therapeutic relationship, and the SCORS as a predictor of personality pathology. Next, we examine the literature of SCORS used with patients as rated by their clinicians from therapy narratives. Current research on SCORS from psychotherapy narratives evaluates reliability and validity, SCORS as a predictor of maladaptive functioning and pathology, adaptive functioning and the therapeutic relationship.

Westen et al. (1991) used TAT narratives to assess the developmental nature of several SCORS dimensions available at that time—complexity of representations, capacity for emotional investment in relationships, morals, and social causality—in normal children and adolescents. They found that 5th graders demonstrated more mature internal representations than second graders, and 12th graders than 9th graders, illustrating the developmental nature of several of the

SCORS variables. As predicted, the affective quality of representations was not a developmental variable in the same way the other scales were. In other words, children do not become more or less benevolent or malevolent in their ways of viewing others throughout childhood and adolescence, although affective quality of representations is a crucial individual-difference variable. Another study assessing the developmental nature of SCORS also found that age was predictive of SCORS self-esteem and emotional investment in relationships ratings from TAT narratives (Coway, Oster, & McCarthy 2010).

Several studies have examined SCORS' relationship to adaptive functioning. Barends & Westen (1990), for example, examined the affective tone one has in relationships (the variable now known as affect) and validity in using the TAT and interview data. They found that the interview data was related to self reported social adjustment as well at the TAT. Leigh and Westen examined the relationship between functioning and complexity. While they found that complexity was not correlated with overall adjustment, when they separated the measure by items, they found that complexity was associated with a low amount of difficulty in intimate relationships, difficulty opening up to others, and social isolation. This means that while complexity may not positively predict social functioning, social pathology is negatively associated with these types of pathology (Leigh et al., 1992).

Calabrese, Farber & Westen (2005) also used the SCORS to assess adaptive functioning. Their study examined the relation between SCORS dimensions such as complexity and relationships (assessed by narratives of early memories) and attachment (as assessed by self report). Individuals whose narratives showed complexity in their representations of themselves and others and capacity for investment in relationships showed greater attachment security by self-report. Perhaps most striking, SCORS variables coded from narratives predicted the marital

status of participants' parents (with better object relations predicting intact parental marriages), whereas self-report measures were non-predictive of this status.

Another study using early memory narratives to assess SCORS examined the measure's impact on the therapeutic relationship. Pinsker-Aspen, Stein, & Hilsenroth (2007) explored the relationship between clinician rated early memories and patient ratings of therapeutic alliance. They used the SCORS to rate early memory narratives to gather information about object relations and to assess whether early memory narratives could provide insight into a patient's relationship with their therapist. The relationship was positive and significant, suggesting that quality of object relations predicts the quality of the therapeutic alliance, which has been shown in numerous studies to predict positive therapeutic outcome (Segal et al., 1993).

While many studies have shown that good SCORS relate to adaptive functioning and a good therapeutic relationship, other studies have assessed how poor SCORS are associated with personality pathology and maladaptive functioning**.** One study evaluated SCORS assessed from early memory narratives to examine how patients with borderline pathology performed on the Personality Assessment Inventory. The borderline scales of the Personality Assessment Inventory were significantly related to the SCORS complexity of representations dimension, documenting a link between SCORS constructs and measures of personality disorders, in this case assessed using an entirely different method (self-report) (Stein, Pinsker-Aspen, & Hilsenroth, 2007).

Clinical application of the SCORS to patients' relational narratives in psychotherapy.

Clinicians see the importance of the way patients tell their stories as a diagnostic tool "distortions, convolutions, ellipses (conspicuous gaps in narration), as well as obvious

interpolations provide some clues as to how patients experience social interactions" (Segal, et al., 1993). While studies conducted from psychotherapy narratives have that additional information that early memory narratives or TAT do not, they measure similar concepts with regards to the SCORS. The following studies measure psychotherapy narratives of SCORS as related to reliability and validity of the measure, the influence on the therapy, what SCORS contributes to the therapist's understanding of the patient, and the causes of maladaptive SCORS.

A study by Peters, et al. (2006), examined reliability and convergent validity of the SCORS in measuring relational narratives and self statements expressed in therapy. The subjects, patients in psychotherapy, were rated by their clinicians using the SCORS, DSM IV axis II disorders (at -.57), DSM axis V global assessment of functioning (at .44), the global assessment of relational functioning scale (at .53), and a social and occupational functioning assessment scale (at .49). They found that there was good to excellent interrater reliability of the SCORS, ranging from .60 to above .74, and convergent validity with all of the scales. This is significant because the convergent validity suggests that the SCORS has utility as a measure of psychiatric, socio-occupational and interpersonal functioning and personality dysfunction in clinical use (Peters, et al., 2006).

In other studies, clinicians have examined SCORS ratings of childhood sexual abuse victims. One study looking at the relationship between childhood sexual abuse and later object relations in adults evaluated clinical outpatients from a community clinic along with levels of complexity, affect, relationships and social causality from early memory narratives (Slavin et al., 2007). Severely abused participants' showed lower scores on the SCORS variables of social causality and complexity of representations. These findings are consistent with a host of studies showing links between early childhood abuse and poorer functioning on the SCORS assessed

from multiple different kinds of narratives, in both adolescents and adults (Nigg et al., 1991; Ogata et al., 1990; Westen et al., 1990)

Another study used the patient's narratives to evaluate SCORS over the period of assessment to evaluate a clinical sample of sexual abuse survivors to determine if there were long-term effects, as well as if psychotherapy can help improve deficits in SCORS. They found that the adult survivors showed significantly lower understanding of social causality and self esteem. The next study examined the effectiveness of psychotherapy on survivors of childhood sexual abuse. Clinicians and experimental raters in this study also rated SCORS based on patient's narratives. They found that ratings of each SCORS variable were highly reliable between therapists and external raters. Further, clinicians saw personality change in their patients, based on analysis of variance between the ratings of over the course of treatment. These changes included having more positive affective representations and expectations, and better control over aggression, as well as improvements in self esteem. There was also a large effect found in therapists ratings of emotional investment in relationships. These studies are meaningful because they further prove that survivors of childhood sexual assault have poorer object relations, and that psychotherapy can help aid this deficit. (Price et al., in press).

Other studies have examined the impact of SCORS on the therapeutic relationship. One , by Porcerelli, Shahar, Blatt, Ford, Mezza, & Greenlee (2006), looked at a clinical inpatient sample to assess the clinical utility of the SCORS. They found significant changes in SCORS over the 15 month period of inpatient treatment, suggesting that inpatient therapy can help improve SCORS.

Porcerelli, Bambery, & Cogan (2011) illustrate the utility of SCORS when applied to a case study of a 13 year old African American boy. They found that the SCORS helped the

clinician in assessing capacity for regulation, attention, and learning, and that certain SCORS variables were related to IQ. This is significant because, though many studies showed that SCORS was predictive of diagnostic information, this study shows SCORS give both a basic diagnosis as well as a rich formulation that could help the therapist understand many things a basic diagnosis would not. In other words, while several studies have shown that the SCORS has an impact on the relationship between the clinician and patient, and that therapy can improve SCORS, this case study shows that even before treatment (during the diagnostic process) the SCORS helps the clinician to understand that patient in a much deeper way than simple psychotherapy narratives alone would.

The goal of this thesis is to examine the application of the SCORS to an adolescent clinical population, in particular to see whether social cognition and object relations predict adaptive functioning, and whether they can do so under statistically stringent conditions, notably after holding constant age and PD diagnosis. Clinicians rely on patient narratives as a primary source for classification and intervention. Clinicians listen not just to the content of patients' stories, but also to their emotional quality and cognitive coherence. The SCORS offers clinicians and researchers the ability to quantify and communicate valuable information about their patients' object relational world and social cognitive abilities.

First, we will look at age differences in SCORS variables. We predict that while some SCORS variables will hold stable between age groups, several will show age differences. Next, as social cognition and object relations concepts are significantly implicated in personality pathology, we will examine differences in SCORS variables observed in adolescent patients who do or do not meet DSM criteria for a PD. In this analysis, we predict that there will be

significant differences in SCORS between PD and non-PD groups. Finally, we will test whether SCORS ratings provide incremental validity over personality disorder diagnosis in predicting domains of adaptive functioning, externalizing psychopathology, and psychiatric history. We predict that the SCORS ratings will provide incremental validity over PD diagnosis in predicting these composites.

Methods

Participants

As part of a larger study of adolescent personality pathology (Westen & Shedler, 2007), we recruited experienced clinicians (psychologists and psychiatrists) registered the American Psychological Association and American Psychiatric Association. We asked clinicians to describe a 13-18 year old patient with persistent personality pathology, defined as "an adolescent patient you are currently treating or evaluating who has enduring pattern of thoughts, feeling, motivation or behavior—that is, personality problems—that cause distress or dysfunction," emphasizing that patients did not need to meet criteria for DSM-IV PD diagnosis and instructing clinicians to disregard the exceptions in the DSM-IV-TR restricting the application of Axis II diagnoses in adolescents. In order to minimize rater-dependent variance, we asked clinicians to describe only one patient. We collected a stratified random sample, stratified by age and gender. Participating clinicians completed packets that included measures of demographics, social cognition and object relations, personality pathology, adaptive functioning, and other variables not relevant for this particular study.

Measures

Clinical Data Form – Adolescent Version (CDF-A). The CDF-A (Westen et al., 2003) is used for gathering information on a wide range of demographic, diagnostic, etiological, and adaptive functioning variables. Clinicians begin by providing information about their discipline, theoretical orientation, years of experience, and employment site. They are then asked to provide information on the patient's basic demographics (sex, age, race, socioeconomic status, living and family situation), diagnosis, psychiatric history (suicide attempts and hospitalization history), DSM-IV Global Assessment of Functioning Scale, general personality functioning (1 = severe PD to 5 = high functioning), externalizing psychopathology (presence/absence of arrest history, violent crime, stealing, lying, truancy, and drug use), school functioning (1 = severe conduct problems / suspensions to 5 = working to full potential), quality of peer relationships (1 = very poor or absent to 5 = very good), and number of close confidants (1 = none, 4 = many).

The CDF has been used in numerous empirical studies (e.g. Westen & Shedler, 1999). Prior research has shown high reliability and validity of CDI variables vis-à-vis ratings by independent expert observers (Dutra, Campbell, & Westen, 2004; Westen et al., 1997). Adaptive functioning and developmental history variables measured by the CDF also show high degrees of correspondence and agreement between clinician-rated and patient self-report assessments (*r*s = .40-.70, Overall Correct Classifications = .74-.96; DeFife et al., 2010).

Axis II Criterion Checklist. Clinicians completed a randomly ordered checklist of all criteria for DSM-IV Axis II disorders to indicate which of the criteria the patient met. We initially asked clinicians to determine whether each criterion was absent or present, as in DSM-IV. Next, we instructed clinicians to rate the extent to which each criterion applied to the patient on a 1-6 Likert-type scale, where a '1' indicated absence, a 3 indicated 'subthreshold' pathology, and a 6 indicated strong presence/severity. These data generated two dimensional measures of

axis II pathology: number of diagnostic criteria present for each Personality Disorder, and the average of the 1-6 ratings for each applicable criterion. Categorical diagnoses were also derived by adding the number of criteria present and applying the DSM-IV decision rules (regarding the number of symptoms required) to generate DSM-IV diagnoses. This method provides results that mirror those of structured diagnostic interviews (Blais & Norman, 1997; Morey, 1988; Westen, et al., 2003).

Social Cognition and Object Relations Scale (SCORS). The SCORS (Stein, et al., 2011; Westen, 1995) is an 8-scale clinician/expert observer-rated coding system applied to narrative data and designed to provide a multidimensional picture of an individual's cognitive and affective capacities to engage in intimate relationships. Each of the eight SCORS variables is scored on a 7-point anchored rating scale; lower scores (e.g., 1 or 2) indicate greater pathology and higher scores (e.g., 6 or 7) indicate greater psychological health. Each of the SCORS dimensions has demonstrated good to excellent inter-rater reliability and validity across studies despite considerable differences in the samples studied, levels of psychiatric distress, and types of narrative data applied to (Huprich & Greenberg, 2003). As frequently practiced in prior studies, we also averaged the 8 SCORS dimensions into an overall (Global) mean (Cronbach's α = .82) to obtain a summary measurement of social cognition and object relations quality.

Results

Clinicians were primarily psychologists (68.5%), predominately male (62.2%), diverse in theoretical orientation [cognitive-behavioral (26.8%), psychodynamic (19.7%), integrative/eclectic (43.3%), biological (4.3%), other (5.9%)] and veteran practitioners, with an average of 16.7 years experience (*SD*= 7.3 years).

The patients (N=254) described were about equally distributed by gender (male = 55%; female = 45%) and ranged in age from 13-18 years, *M*=15.6 (*SD*=1.5). Patients were of varied socioeconomic status (68% middle class, 18% working class, 8% upper class, 6% poor) and ethnicity (76% Caucasian, 9% African-American, 7% Hispanic, 2% Asian, and 7% other), and showed a wide range in levels of functioning and degree of psychopathology as evidenced by Global Assessment of Functioning scale scores ranging from 35 (severe impairment in several areas) to 85 (absent or minimal symptoms, good functioning), *M*=56.5, *SD*=9.2. With respect to axis II diagnosis, 72% of patients met criteria for a PD according to the DSM symptom checklist. Length of time in treatment with the current clinician averaged roughly one year, *M* = 12.6 months, *SD* = 10.2 months. Table 1 provides the Ms and SDs of SCORS variables.

We first examined the relationship between age and SCORS variables to assess the developmental nature of the variables. To do this, we divided the sample into two age groups (13-15 and 16-18) to form an approximately evenly distributed number of patients and ran an independent means t-test. We also calculated Cohen's *d* to illustrate the magnitude of effect size difference. As predicted, Complexity, Morals, Causality, and Aggression exhibited developmental growth patterns, significantly increasing across the adolescent age groups whereas Affect, Self-Esteem, and Identity did not exhibit differences. Relationships also did not exhibit developmental growth across groups, contrary to our hypothesis. While the size of the effect was small, the SCORS-Global ratings significantly increased across the earlier and the later age groups.

We next examined the relation between SCORS variables and presence of an axis II disorder. Table 3 illustrates t-tests and effect size differences for SCORS variables between

patients with or without a PD diagnosis, showing significant and moderate-to-large effect size differences across all individual SCORS variables and the global summary score.

To assess multiple domains of adaptive functioning, we created composite functioning variables from CDF-A ratings, including global adaptive functioning (standardized mean of DSM-IV Global Assessment of Functioning Scale, personality functioning, quality of peer relationships, and number of close confidants), school functioning, externalizing psychopathology (standardized mean of arrest history, violent crime, stealing, lying, truancy, and drug use), and psychiatric (standardized mean of suicide attempt and hospitalization history). Table 4 provides correlations between all SCORS variables and the four CDF-A adaptive functioning composite measures. Individual SCORS variables showed strong and significant associations to measures of adaptive functioning across domains, with the exception of Affect to suicide/hospitalization history and Self-Esteem to externalizing psychopathology. The combined SCORS-Global mean was more strongly correlated with each adaptive functioning composite than any individual rating scale (with the exception of a slightly larger relationship between Morals and externalizing psychopathology).

As our most stringent test of the relation between social cognition and object relations in adolescence and adaptive functioning, we evaluated the extent to which SCORS variables contribute unique and incremental variance in adaptive functioning beyond age and presence of a PD diagnosis. We ran four regression analyses (seen in Tables 5 and 6) with the four composite adaptive functioning variables as criterion variables, entering age and presence/absence of an axis II diagnosis in step 1 and SCORS-Global ratings in step 2. Using multiple regression, age was not significantly associated with any measures of global functioning. In contrast, clinician-identified PD diagnosis was significantly predictive of global and school functioning,

externalizing psychopathology, and suicide/hospitalization history. Entering object relations data in step 2, SCORS-Global ratings were significantly associated with each of the adaptive functioning variables, contributing significant incremental variance to each regression model, as DSM-IV personality pathology became no longer a significant predictor.

Discussion

These results support the utility of SCORS rating dimensions in adolescent clinical samples as a measure of stable and enduring personality pathology. Furthermore, SCORS data contributes unique and additional explanatory power in models of adolescent adaptive functioning, school functioning, externalizing psychopathology, and psychiatric history.

The SCORS measure was sensitive enough to detect small, yet significant, developmental growth patterns across early and late-stage adolescents in the domains of Complexity of Representations, Emotional Investment in Values and Moral Standards, Understanding of Social Causality, and the Experience and Management of Aggressive Impulses. These variables are developmentally important in that adolescents should attain more complex representations of others over time, solidify their values and moral beliefs, tell more coherent narratives, and make better sense of relational exchanges, and improve anger tolerance and impulse control. While we anticipated adolescents to invest more strongly in close and intimate relationships over time, the change in Emotional Investment in Relationships was not large enough to reach significance. At the same time, the small magnitude effect sizes of these differences suggest that the SCORS taps into consistent and enduring patterns of self and interpersonal functioning.

Other facets of the SCORS are expected to be non-developmental in nature, as one's affective expectations of relationships shouldn't change from malevolent to benevolent over

development in adolescence; self-esteem should not rise consistently in the teen years; and identity should not significantly fully formed or coherent during adolescent years, especially with a sick population, many of whom are likely to have identity disturbances that will not resolve until later adult treatment, if at all.

As predicted, we also found significant associations between personality disorders and SCORS. This strong relationship between PDs and SCORS further indicates the presence of personality pathology in adolescents. Our findings that adolescents meeting DSM-IV criteria for personality disorder diagnosis showed that significantly more pathological SCORS ratings contributes to an already substantial body of literature on the presence of self-other representational disturbances in individuals with PDs (Bender & Skodol, 2007; Dimaggio et al., 2006). However, the nature of applying personality diagnosis in adolescents is controversial due to concerns about stigmatization and questions about concurrent and predictive validity. Although the DSM-IV-TR explicitly discourages the application of personality disorder diagnosis in adolescents, investigation of the development of personality pathology in this age group is vital in light of the increasing research that shows that PDs are diagnosable in adolescents, and are strongly associated with concurrent and future psychiatric problems and maladaptive behaviors (Bernstein et al., 1996; Bornovalova et al., 2009; Cohen et al., 2005; Crawford & Cohen, 2008; de Clercq et al., 2009; Johnson et al., 1999; Shiner, 2009; Westen, et al., 2011).

We found large and significant relationships between SCORS and adaptive functioning variables. More specifically, we saw that each of the SCORS variables were related to general adaptive functioning in adolescents, as well as how they perform in school, their externalizing psychopathology, and their prior suicide attempts and hospitalizations. The SCORS was not

only meaningfully related to an array of adaptive functioning and psychopathology domains, but for predicting concurrent levels of global adaptive functioning, school functioning, externalizing problems, and psychiatric history, it also significantly outperformed the current PD diagnostic standard.

Limitations.

This study has a number of limitations. For example, future research should investigate social cognition and object relations seen in larger and more diverse adolescent samples. As socioeconomic status has been related to a greater incidence of PD development (Cohen et al., 2008), future studies should more closely examine the relationship between SCORS ratings and socioeconomic status. Furthermore, all patients described were being seen in treatment for enduring patterns related to personality and interpersonal problems. As the SCORS is designed to assess how the subject views themselves and others, especially with regards to interpersonal relationships, this could lead to an overlap in the predictor and adaptive functioning criterion variables. A non-clinical sample may have yielded different results. However, the findings do lead to the suggestion that SCORS constructs could usefully be applied in clinical settings to offer a multidimensional portrait the patient. Another limitation of this study is that even though it attempts to evaluate the developmental nature of SCORS, it is not a longitudinal study. While future research should attempt to evaluate the longitudinal development and later predictive validity of SCORS-rated capacities, the modest differences illustrated in the anticipated direction (of growth) and correspondence with other samples suggests that the SCORS captures enduring aspects of personality, while remaining sensitive to developmental growth processes.

Finally, a single informant (the treating clinician) provided all the data for each case, raising questions of potential interdependence of ratings of the SCORS and its correlates. This

limitation is actually the norm in psychiatric research, in which a single informant (usually the patient) provides all or most of the data (either by self-report or structured interviews that rely primarily on self-report). The reliance on self-report data is particularly pervasive in personality research (Robins, Tracy, & Sherman, 2007; Schwarz, 1999), where publication surveys of major personality research journals indicate that 95%-98% of the articles published are based on data obtained from self-report measurements of personality, with over 70% of cases where self-report instruments were the only measure used (Kagan, 2007; Vazire, 2006). Future research should employ independent ratings from multiple methods and sources to avoid potential bias. However, several considerations reduce concerns about potential effects of clinicians' biases. The SCORS instrument has been widely used in prior research and demonstrates high reliability across raters and narrative data sources (Huprich & Greenberg, 2003). Research suggests that clinicians can make highly reliable and valid judgments about patient adaptive functioning if given psychometric instruments such as the one used in this study to quantify their observations and inferences (DeFife, et al., 2010; Hilsenroth et al., 2000; Westen & Weinberger, 2004). Finally, while both self and informant reports of personality problems are meaningfully related to concurrent measurements adaptive functioning and symptomatology, informant reports of personality pathology are found to be more useful predictors of future social and occupational impairments (Oltmanns & Turkheimer, 2009).

Clinical Implications.

The DSM-5 is on the horizon, and with it will bring a reformulation of general criteria for personality disorder. One of the main controversies of the current DSM's diagnoses of personality is with the caution against applying personality diagnosis before the age of 18. Johnson and Cohen's (2000) research discusses that personality diagnosis in adolescence has

important implications for future outcomes. They found that cluster A and cluster B personality disorders, as well as other personality disorder symptoms during adolescence, may increase the risk for violent behavior persisting into (early) adulthood. Adolescents with a greater number of DSM IV cluster A or B PD symptoms were more likely than other adolescents in the community to commit violent acts during adolescence and early adulthood, ranging from arson to robbery. These findings also held when they controlled for age. This means that adolescents with many symptoms of personality disorders are more likely to be violent than other adolescents in the community without personality pathology. This reaffirms a major clinical implication that there may be adolescent personality and pathology, and therefore, that adolescents can be treated for it. Furthermore, if a violent offender is treated and helped in their youth, perhaps it could prevent the evolution of criminal behavior in certain individuals. (Johnson et al., 2000)

In a similar study, Chen and Cohen (2004) examined the association between adolescent personality disorders with conflict between romantic partners at ages (17-27, early adulthood, post adolescence). Findings indicated that personality disorders assessed at 16 were associated with higher rates of partner conflict and that personality disorders contribute independently to relationship conflict over and above the effects of an axis I disorder. This finding is significant and also has similar clinical implications in that, if personality pathology is treated as adolescent, perhaps subsequent life problems like partner conflict (verbal, physical, and emotional abuse), can be avoided (Chen et al., 2004).

While Chen's and Johnson's research evaluated the predictive nature of personality pathology on violence and conflict-ridden relationships, this article evaluates, similarly, the predictive nature of SCORS variables in adaptive functioning. The results have shown that the

SCORS is in fact, strongly associated with patterns of adaptive functioning above and beyond current measures of personality diagnosis.

As seen in this adolescent clinical sample, the failure to consider pathological manifestations of self/other representations and interpersonal relations would overlook essential aspects of clinical presentation, with a potentially detrimental impact on treatment conceptualization and effectiveness. The SCORS offers a framework for a clinically-meaningful and empirically-sound assessment of self and other representations and interpersonal functioning capacities that outperforms the current diagnostic benchmark of personality diagnosis in reliably and validly capturing varied domains of adaptive functioning and psychopathology.

Table 1.

Means and Standard Deviations for SCORS variables

	Mean (SD)
Complexity	3.99 (1.15)
Affect	4.16 (1.17)
Relationships	3.50 (1.36)
Morals	3.89 (1.45)
Causality	3.69 (1.17)
Aggression	3.82 (1.42)
Self-esteem	3.79 (1.04)
Identity	4.43 (1.09)
Global	3.91 (.82)

Table 2.

T-tests describing differences in means per different age groups

	Age group				
	13-15 years n = 119	16-18 years n = 135	*T*	*df*	*d*
Complexity	**3.82 (1.12)**	**4.14 (1.15)**	**2.27****	**252**	**.28**
Affect	4.19 (1.08)	4.13 (1.25)	-.46	252	-.05
Relationships	**3.37 (1.44)**	**3.61 (1.28)**	**1.44**	**252**	**.18**
Morals	**3.72 (1.45)**	**4.04 (1.43)**	**1.74***	**252**	**.22**
Causality	**3.50 (1.15)**	**3.87 (1.16)**	**2.56****	**252**	**.32**
Aggression	**3.61 (1.40)**	**4.01 (1.41)**	**2.23****	**252**	**.29**
Self-esteem	3.84 (1.06)	3.75 (1.03)	-.70	252	-.09
Identity	4.45 (1.05)	4.41 (1.13)	-.28	252	-.04
Global	**3.81 (.82)**	**3.99 (.82)**	**1.76***	**252**	**.22**

Note: Variables with hypothesized differences are highlighted in bold. *$p \leq .05$, **$p \leq .01$ (one-tailed)

Table 3.

T-tests describing differences in means by Personality Disorder (PD) diagnosis.

	Diagnosis				
	PD	No PD			
	n = 183	n = 71	*T*	*df*	*d*
Complexity	**3.77 (1.11)**	**4.56 (1.07)**	**5.21*** **	**252**	**.72**
Affect	**3.97 (1.15)**	**4.63 (1.10)**	**4.17*** **	**252**	**.58**
Relationships	**3.20 (1.28)**	**4.28 (1.26)**	**6.10*** **	**252**	**.85**
Morals	**3.57 (1.42)**	**4.70 (1.12)**	**5.96*** **	**252**	**.84**
Causality	**3.52 (1.12)**	**4.14 (1.16)**	**3.92*** **	**252**	**.55**
Aggression	**3.63 (1.44)**	**4.31 (1.23)**	**3.49*** **	**252**	**.49**
Self-esteem	**3.62 (1.04)**	**4.23 (.91)**	**4.28*** **	**252**	**.61**
Identity	**4.25 (1.03)**	**4.87 (1.11)**	**4.22*** **	**252**	**.59**
Global	**3.69 (.75)**	**4.47 (.73)**	**7.42*** **	**252**	**1.05**

Note: Variables with hypothesized differences are highlighted in bold. *$p \leq .05$, **$p \leq .01$, *** $p \leq .001$ (one-tailed)

Table 4.

Pearson correlations between SCORS variables and adaptive functioning composite scores.

	Global adaptive functioning	School functioning	Externalizing psychopathology	Suicide attempts and prior hospitalizations
Complexity	.51***	.34***	-.36***	-.24***
Affect	.49***	.27***	-.23***	-.12
Relationships	.51***	.30***	-.36***	-.27***
Morals	.48***	.43***	-.58***	-.15*
Causality	.40***	.30***	-.22***	-.15*
Aggression	.44***	.40***	-.48***	-.27***
Self-esteem	.30***	.15***	.04	-.21***
Identity	.38***	.29***	-.27***	-.25***
Global	.66***	.47***	-.49***	-.31***

Note: n = 254; *$p \leq .05$, **$p \leq .01$, *** $p \leq .001$ (two-tailed)

Table 5.

Linear regression of predictor variables associated with measures of adaptive functioning.

	B	*SE B*	*Stand. β*	*R*	R^2	*F* change
Global adaptive functioning						
Model 1				.36	.13	18.53***
Age	.00	.03	.00			
DSM-IV PD	-.55	.09	-.36***			
Model 2				.67	.45	144.15***
Age	-.02	.02	-.05			
DSM-IV PD	-.14	.08	-.09			
SCORS-Global	.53	.04	.63***			
School functioning						
Model 1				.19	.04	4.56*
Age	.00	.04	.00			
DSM-IV PD	-.38	.13	-.19**			
Model 2				.47	.23	61.33***
Age	-.03	.03	-.04			
DSM-IV PD	.04	.13	.02			
SCORS-Global	.54	.07	.48***			

Note: $n = 254$, *$p < .05$, **$p < .01$, ***$p < .001$

Table 6.

Linear regression of predictor variables associated with externalizing pathology and suicide and hospitalization history.

	B	*SE B*	*Stand. β*	*R*	R^2	*F* change
Externalizing pathology						
Model 1				.28	.08	10.54***
Age	.00	.03	.00			
DSM-IV PD	.40	.09	.28***			
Model 2				.49	.24	54.68***
Age	.01	.02	.03			
DSM-IV PD	.13	.09	.09			
SCORS-Global	-.36	.05	-.45***			
Suicide and hospitalization history						
Model 1				.16	.03	3.17*
Age	.02	.04	.04			
DSM-IV PD	.28	.12	.15*			
Model 2				.31	.10	20.60***
Age	.04	.03	.06			
DSM-IV PD	.04	.12	.02			
SCORS-Global	-.31	.07	-.30***			

Note: $n = 254$ *$p < .05$, **$p < .01$, ***$p < .001$

References

American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders* (text revision, 4th ed.). Washington, DC: American Psychiatric Association.

Andersen, S.M., & Chen, S. (2002). The relational self: An interpersonal social-cognitive theory. *Psychological Review, 109*(4), 619-644.

Andersen, S.M., & Cole, S.W. (1990). Do I know you?": The role of significant others in general social perception. *Journal of Personality and Social Psychology, 59*(3), 384-399.

Bambery, M., & Porcerelli, J.M. (2006). Psychodynamic therapy for Oppositional Defiant Disorder: Changes in personality, object oelations, and adaptive function after six months of treatment. *Journal of the American Psychoanalytic Association, 54*(4), 1334-1339.

Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice-Hall.

Barends, A., Westen, D., Leigh, J., Silbert, D., & Byers, S. (1990). Assessing affect-tone of relationship paradigms from TAT and interview data. *Psychological Assessment: A Journal of Consulting and Clinical Psychology, 2*, 1-4.

Bender, D.S., & Skodol, A.E. (2007). Borderline personality as a self-other representational disturbance. *Journal of Personality Disorders, 21*(5), 500-517.

Benjamin, L.S. (1996). *Interpersonal diagnosis and treatment of personality disorders* (2nd ed.). New York: The Guilford Press.

Bernstein, D.P., Cohen, P., Skodol, A., Bezirganian, S., & Brook, J.S. (1996). Childhood antecedents of adolescent personality disorders. *American Journal of Psychiatry, 153*, 907-913.

Blais, M., & Norman, D. (1997). A psychometric evaluation of the DSM-IV personality disorder criteria. *Journal of Personality Disorders, 11*, 168-176.

Blakemore, S.J., Burnett, S., & Dahl, R.E. (2010). The role of puberty in the developing adolescent brain. *Human Brain Mapping, 31*(6), 926-933.

Bornovalova, M.A., Hicks, B.M., Iacono, W.G., & McGue, M. (2009). Stability, change, and heritability of borderline personality disorder traits from adolescence to adulthood: A longitudinal twin study. *Development and Psychopathology, 21*(Special Issue 04), 1335-1353. doi: doi:10.1017/S0954579409990186

Bowlby, J. (1969). *Attachment* (Vol. 1). New York: Basic Books.

Burgner, M., & Edgcumbe, R. (1972). Some problems in the conceptualization of early object relationships, Part II: The concept of object constancy. *Psychoanalytic Study of the Child, 27*, 315-333.

Calabrese, M.L., Farber, B.A., & Westen, D. (2005). The relationship of adult attachment constructs to object relational patterns of representing self and others. *Journal of the American Academy of Psychoanalysis and Dynamic Psychiatry, 33*(3), 513-530.

Callahan, K.L., Price, J.L., & Hilsenroth, M.J. (2003). Psychological assessment of adult survivors of childhood sexual abuse within a naturalistic clinical sample. *Journal of Personality Assessment, 80*(2), 173-184.

Chen, H., Cohen, P., Johnson, J.G., Kasen, S., Sneed, J.R., & Crawford, T.N. (2004). Adolescent personality disorders and conflict with romantic partners during the transition to adulthood. *Journal of personality disorders, 18*(6), 507-525.

Cohen, P., Chen, H., Gordon, K., Johnson, J., Brook, J., & Kasen, S. (2008). Socioeconomic background and the developmental course of schizotypal and borderline personality disorder symptoms. *Development and Psychopathology, 20*(02), 633-650.

Cohen, P., Crawford, T., Johnson, J., & Kasen, S. (2005). The children in the community study of developmental course of personality disorder. *Journal of Personality Disorders: Special Issue on Longitudinal Studies, 19*(5), 466-486.

Conway, F., Oster, M., & McCarthy, J. (2010). Exploring object relations in hospitalized children with caregiver loss. *Journal of Infant, Child, and Adolescent Psychotherapy, 9*(2), 108-117.

Crawford, T., & Cohen, P. (2008). Comorbid Axis I and Axis II disorders in early adolescence: Outcomes 20 years later. *Archives of General Psychiatry, 65*(6), 641.

de Clercq, B., van Leeuwen, K., van den Noortgate, W., de Bolle, M., & de Fruyt, F. (2009). Childhood personality pathology: Dimensional stability and change. *Development and Psychopathology, 21*(Special Issue 03), 853-869. doi: doi:10.1017/S0954579409000467

DeFife, J.A., Drill, R., Nakash, O., & Westen, D. (2010). Agreement between clinician and patient ratings of adaptive functioning and developmental history. *American Journal of Psychiatry, 167*(12), 1472-1478. doi: 10.1176/appi.ajp.2010.09101489

Dimaggio, G., Semerari, A., Carcione, A., Procacci, M., & Nicolo, G. (2006). Toward a model of self pathology underlying personality disorders: Narratives, metacognition, interpersonal cycles and decision-making processes. *Journal of Personality Disorders, 20*(6), 597-617.

Dutra, L., Campbell, L., & Westen, D. (2004). Quantifying clinical judgment in the assessment of adolescent psychopathology: Reliability, validity, and factor structure of the Child Behavior Checklist for Clinician-Report. *Journal of Clinical Psychology, 60*, 65-85.

Fairbairn, W.R.D. (1954). *An object-relations theory of the personality*. New York: Basic Books.

Harlow, H., & Zimmerman, R. (1959). Affectional responses in the infant monkey. *Science, 130*, 421-432.

Hilsenroth, M.J., Ackerman, S.J., Blagys, M.D., Baumann, B.D., Baity, M.R., Smith, S.R., . . . Holdwick, D.J. (2000). Reliability and validity of DSM-IV axis V. *American Journal of Psychiatry, 157*(11), 1858-1863.

Huprich, S.K., & Greenberg, R.P. (2003). Advances in the assessment of object relations in the 1990s. *Clinical Psychology Review, 23*, 665-698.

Johnson, J.G., Cohen, P., Skodol, A.E., Oldham, J.M., Kasen, S., & Brook, J.S. (1999). Personality disorders in adolescence and risk of major mental disorders and suicidality during adulthood. *Archives of General Psychiatry, 56*(9), 805-811.

Johnson, J.G., Cohen, P., Smailes, E., Kasen, S., Oldham, J.M., Skodol, A.E., & Brook, J.S. (2000). Adolescent personality disorders associated with violence and criminal behavior during adolescence and early adulthood. *American Journal of Psychiatry, 157*(9), 1406-1412.

Kagan, J. (2007). A trio of concerns. *Perspectives on Psychological Science, 2*(4), 361-376.

Kernberg, O. (1989). *Severe personality disorders*. New Haven, Connecticut: Yale University Press.

Kernberg, O.F. (1984). *Severe personality disorders: Psychotherapeutic strategies*. New Haven, CT: Yale University Press.

Livesley, W. (1998). Suggestions for a framework for an empirically based classification of personality disorder. *Canadian Journal of Psychiatry, 43*(2), 137-147.

Markus, H. (1977). Self-schemata and processing information about the self. *Journal of Personality and Social Psychology, 35*(2), 63-78.

Markus, H., & Zajonc, R. (1985). The cognitive perspective in social psychology. In G. Lindzey & E. Aronson (Eds.), *Handbook of social psychology* (3rd ed., pp. 137-230). New York: Random House.

Morey, L.C. (1988). Personality disorders in DSM-III and DSM-III-R: Convergence, coverage, and internal consistency. *American Journal of Psychiatry, 145*, 573-577.

Murray, H.A. (1943). *Thematic Apperception Test manual*. Cambridge, MA: Harvard University Press.

Nigg, J.T., Silk, K.R., Westen, D., Lohr, N.E., Gold, L.J., Goodrich, S., & Ogata, S. (1991). Object representations in the early memories of sexually abused borderline patients. *American Journal of Psychiatry, 148*(7), 864-869.

Ogata, S.N., Silk, K.R., Goodrich, S., Lohr, N.E., Westen, D., & Hill, E.M. (1990). Childhood sexual and physical abuse in adult patients with borderline personality disorder. *American Journal of Psychiatry, 147*, 1008-1013.

Oltmanns, T.F., & Turkheimer, E. (2009). Person perception and personality pathology. *Current Directions in Psychological Science, 18*(1), 32-36.

Peters, E.J., Hilsenroth, M.J., Eudell-Simmons, E.M., Blagys, M.D., & Handler, L. (2006). Reliability and validity of the Social Cognition and Object Relations Scale in clinical use. *Psychotherapy Research, 16*(5), 617-626.

Pinsker-Aspen, J.H., Stein, M.B., & Hilsenroth, M.J. (2007). Clinical utility of early memories as a predictor of early therapeutic alliance. *Psychotherapy: Theory/Research/Practice/Training, 44*(1), 96-109.

Porcerelli, J.H., Cogan, R., & Bambery, M. (2011). The mental functioning axis of the psychodynamic diagnostic manual: an adolescent case study. *Journal of personality assessment, 93*(2), 177-184.

Porcerelli, J.H., Dauphin, V.B., Ablon, J.S., Leitman, S., & Bambery, M. (2007). Psychoanalysis with avoidant personality disorder: A systematic case study. *Psychotherapy: Theory/Research/Practice/Training, 44*(1), 1-13.

Porcerelli, J.H., Shahar, G., Blatt, S.J., Ford, R.Q., Mezza, J.A., & Greenlee, L.M. (2006). Social Cognition and Object Relations Scale: Convergent validity and changes following intensive inpatient treatment. *Personality and Individual Differences, 41*(3), 407-417.

Price, J.L., Hilsenroth, M., Callahan, K., Petretic-Jackson, P.A., & Bonge, D. (in press). A pilot study of psychodynamic psychotherapy for adult survivors of childhood sexual abuse. *Clinical Psychology and Psychotherapy*.

Price, J.L., Hilsenroth, M.J., Callahan, K.L., Petretic Jackson, P.A., & Bonge, D. (2004). A pilot study of psychodynamic psychotherapy for adult survivors of childhood sexual abuse. *Clinical Psychology & Psychotherapy, 11*(6), 378-391.

Robins, R.W., Tracy, J.L., & Sherman, J.W. (2007). What kinds of methods do personality psychologists use? In R. W. Robins, R. C. Fraley & R. F. Krueger (Eds.), *Handbook of research methods in personality psychology* (pp. 673-678). London: Guilford.

Rutter, M. (1987). Temperament, personality and personality disorder. *The British Journal of Psychiatry, 150*(4), 443-458.

Schwarz, N. (1999). Self-reports: How the questions shape the answers. *American Psychologist, 54*, 93-105.

Segal, H.G., Westen, D., Lohr, N.E., & Silk, K.R. (1993). Clinical assessment of object relations and social cognition using stories told to the picture arrangement subtest of WAIS-R. *Journal of Personality Assessment, 61*(1), 58-80.

Shiner, R.L. (2009). The development of personality disorders: Perspectives from normal personality development in childhood and adolescence. *Development and Psychopathology, 21*(Special Issue 03), 715-734. doi: doi:10.1017/S0954579409000406

Sibley, M.H., Evans, S.W., & Serpell, Z.N. (2010). Social cognition and interpersonal impairment in young adolescents with ADHD. *Journal of Psychopathology and Behavioral Assessment, 32*(2), 193-202.

Skodol, A.E., Bender, D.S., Oldham, J.M., Clark, L.A., Morey, L.C., Verheul, R., . . . Siever, L.J. (2011). Proposed changes in personality and personality disorder assessment and diagnosis for *DSM-5,* Part II: Clinical application. *Personality Disorders: Theory, Research, and Treatment, 2*(1), 23-40. doi: 10.1037/a0021892

Slavin, J.M., Stein, M.B., Pinsker-Aspen, J.H., & Hilsenroth, M.J. (2007). Early memories from outpatients with and without a history of Childhood Sexual Abuse. *Journal of Loss and Trauma, 12*(5), 435-451.

Stein, M., Hilsenroth, M., Slavin-Mulford, J., & Pinsker, J. (2011). *Social Cognition and Object Relations Scale: Global Rating Method (SCORS-G), unpublished manuscript*. Boston, MA: Massachusetts General Hospital and Harvard Medical School. www.psychsystems.net/Manuals.

Stein, M.B., Pinsker-Aspen, J.H., & Hilsenroth, M.J. (2007). Borderline pathology and the Personality Assessment Inventory (PAI): An evaluation of criterion and concurrent validity. *Journal of Personality Assessment, 88*(1), 81-89.

Stein, M.B., Siefert, C.J., Stewart, R.V., & Hilsenroth, M.J. (in press). Relationship between the Social Cognition and Object Relations Scale (SCORS) and attachment style in a clinical sample. *Clinical Psychology & Psychotherapy*. doi: 10.1002/cpp.721

Vazire, S. (2006). Informant reports: A cheap, fast, and easy method for personality assessment. *Journal of Research in Personality, 40*(5), 472-481.

Wampold, B.E. (2010). *The basics of psychotherapy: An introduction to theory and practice*. Washington, DC: American Psychological Association.

Westen, D. (1991a). Clinical assessment of object relations using the TAT. *Journal of Personality Assessment, 56*(1), 56-74.

Westen, D. (1991b). Social cognition and object relations. *Psychological Bulletin, 109*, 429-455.

Westen, D. (1995). *Social Cognition and Object Relations Scale—Global ratings (SCORS-G), Unpublished manuscript*. Cambridge, MA: The Cambridge Hospital and Harvard Medical School. www.psychsystems.net/Manuals.

Westen, D., Betan, E., & DeFife, J.A. (2011). Identity disturbance in adolescence: Associations with borderline personality disorder. *Development and Psychopathology, 23*, 305-313.

Westen, D., Klepser, J., Silverman, M., Ruffins, S.A., Lifton, N., & Boekamp, J. (1991). Object relations in childhood and adolescence: The development of working representations. *Journal of Consulting and Clinical Psychology, 59*(3), 400-409.

Westen, D., Ludolph, P., Lerner, H., Ruffins, S., & Wiss, C.F. (1990). Object relations in borderline adolescents. *Journal of the American Academy of Child and Adolescent Psychiatry, 29*(3), 338-348.

Westen, D., & Muderrisoglu, S. (2003). Reliability and validity of personality disorder assessment using a systematic clinical interview: Evaluating an alternative to structured interviews. *Journal of Personality Disorders, 17*, 350-368.

Westen, D., Muderrisoglu, S., Fowler, C., Shedler, J., & Koren, D. (1997). Affect regulation and affective experience: Individual differences, group differences, and measurement using a Q-sort procedure. *Journal of Consulting & Clinical Psychology, 65*, 429-439.

Westen, D., & Shedler, J. (1999). Revising and assessing Axis II, Part 1: Developing a clinically and empirically valid assessment method. *American Journal of Psychiatry, 156*, 258-272.

Westen, D., & Shedler, J. (2007). Personality diagnosis with the Shedler-Westen Assessment Procedure (SWAP): Integrating clinical and statistical measurement and prediction. *Journal of Abnormal Psychology, 116*(4), 810-822.

Westen, D., Shedler, J., Durrett, C., Glass, S., & Martens, A. (2003). Personality diagnosis in adolescence: DSM-IV axis II diagnoses and an empirically derived alternative. *American Journal of Psychiatry, 160*, 952-966.

Westen, D., & Weinberger, J. (2004). When clinical description becomes statistical prediction. *American Psychologist, 59*, 595-613.

Winnicott, D.W. (1953). Transitional objects and transitional phenomena: A study of the first not-me possession. *International Journal of Psychoanalysis, 34*, 89-97.

Winnicott, D.W. (1971/2005). *Playing and reality* (2nd ed.). New York: Routledge.