Object Relations, Internal Resources, and HIV/AIDS Risk:

A Rorschach Study

Virginia Andersen, M.Ed., Ed.S.

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Arietta Slade, Ph.D.
Chairman of Examining Committee

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Maureen O'Connor, Ph.D.
Executive Officer in Psychology

Abstract

OBJECT RELATIONS, INTERNAL RELATIONS, AND HIV/AIDS RISK: A RORSCHACH STUDY

By

Virginia Andersen

Advisor: Professor Arietta Slade, Ph.D.

The purpose of this study was to explore the quality of Rorschach scores of a population who self-reported sexual risk-taking behaviors that place them at increased risk for contracting HIV. It was hypothesized that this group would produce scores indicative of fewer internal resources available for impulse inhibition, specifically capacity for affect regulation and stress tolerance. It was further predicted that a measure of object relations would indicate that study participants would generally experience interpersonal interactions as imbalanced and possibly threatening. This group produced significantly lower scores with regard to affect regulation, but did not differ from the normed, non-clinical sample with regard to stress tolerance. Further, study participants produced scores in the healthy range on the measure of object relational development. The potential theoretical and clinical implications of this finding are discussed.

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CHAPTER ONE

LITERATURE REVIEW

Introduction

Over fifty-six thousand new cases of HIV were diagnosed in the United States in 2006 alone (Centers for Disease Control [CDC], 2007), suggesting that the AIDS epidemic is far from over. Fifty percent of new infections occurred in men who have sex with men (MSM). Research suggests that the higher rates of HIV transmission among MSM is fueled, in part, by the high prevalence of the combination of drug use and high-risk sexual behavior in this population. Because drug use, and particularly use of stimulants such as methamphetamine and cocaine, often reduces inhibitions and increases sexual drive, it has been consistently linked to HIV-associated risk among MSM (Colfax & Shoptaw, 2005; Halkitis & Parsons, 2002).

Many researchers and clinicians working in psychiatry, epidemiology, public health, and social psychology have tried to understand why these maladaptive behaviors persist despite the obvious health risks (e.g., McKirnan, Ostrow, & Hope, 1996; Woody, Donnell, Seage, Metzger, Marmor, Koblin, Buchbinder, Gross, Stone, & Judson, 1999; Zuckerman & Kuhlman, 2000; Doremus-Fitzwater, Varlinskaya, & Spear, 2011). While these efforts have yielded a number of insights into the psychopathology of risk taking, little is known about the internal lives and particularly the object relations of high risk-taking individuals. From a dynamic perspective, object relations would seem to play a pivotal role in the development of severe impulsivity and other aspects of pathological risk-taking. Impoverished object relations have been linked to interpersonal styles akin to those of individuals exhibiting what is described in the DSM-IV-TR (2000) as “Cluster B” personality traits; these include the impulsive, emotional, and erratic

behaviors frequently observed in substance abusing populations (Vanem, Krog, & Hartmann, 2008; Wurmser, 1974).

The study to be described below will examine the Rorschach protocols of MSM who report that they engage in high-risk sexual behavior and abuse drugs and alcohol. A mixed qualitative/quantitative methodology will be used. First, the hypothesis that this population will show signs of diminished internal resources will be tested by comparing their scores on Rorschach scales that measure impulsivity, affect regulation, and stress tolerance to those of a normed, non-clinical sample. Second, this same sample's scores on a measure of the quality of object relations on the Rorschach will be examined descriptively and qualitatively.

The literature review that follows is presented in three sections, beginning with a general review of risk-taking as it relates to the proliferation of HIV, including personality traits within this population as well as the role of illicit drug use and alcohol abuse in the expression of these traits. The second section explores psychodynamic understandings of impulsivity and risk, specifically as each relates to object relations and mentalization. The final section addresses the use of the Rorschach in the dynamic assessment of those traits associated with a propensity for risk taking.

Risk Taking – An Overview

Though by no means a new concern, both pre-meditated and impulsive risk-taking appears to have reached problematic proportions in some communities and within certain subcultures. Since the emergence of the AIDS epidemic, sexual risk-taking and its antecedents have received increased attention as researchers attempt to curtail its proliferation. While the health repercussions of certain behavioral risks have been well-established, a consensus has yet to be reached as to the origins of these behaviors. And while failure to use a condom during

high-risk sex is a clear example of a behavior that increases the risk for HIV, the abuse of drugs and alcohol constitutes not only a health risk in its own right, but also a possible confounding factor in an individual's ultimate tendency to employ risk-reduction measures. As such, why and under what circumstances individuals engage in risky behavior continues to be a topic for exploration, and several theories have emerged.

A first approach highlights the direct link between substance abuse and other risk-taking behaviors. The ultimate implication is that substances will lower inhibitions and diminish decision-making capabilities, increasing the likelihood that an individual will engage in activities that put that him or her at risk. While substance abuse itself has significant health repercussions, it is considered an intermediate rather than a direct risk behavior with regard to HIV proliferation. However, given that substance abuse is frequently associated with HIV risk taking behaviors, some research has considered the antecedents of substance abuse disorders. While there exist numerous theories regarding the development of substance abuse disorders, Tarter, Blackson, Brigham, Moss, and Capara (1995) suggest that -- in individuals who tend to experience and express anger in the context of provocation 'irritability' -- substance abuse serves to regulate negative affects. Following 40 adolescent boys at risk for substance abuse, they examined stress reactivity, behavioral impulsivity, irritability and liability. The authors found that adolescents who score high on measures of irritability were more likely to ultimately abuse drugs and alcohol than controls. As a result, these authors hypothesized that drug abuse itself is the result of an attempt to manage or stabilize negative, intolerable affects.

Aggressive behavior is also frequently linked with substance abuse. In their longitudinal study of 1,000 adolescents and young adults, Caspi, Begg, Dickinson, Harrington, Langley, Moffitt, and Silva (1997) assessed risky behaviors (including alcohol dependence and sexual

risk-taking behaviors) at various intervals. Their data showed significant positive correlations between alcohol dependence and traits indicating aggression, social isolation, and poor stress-reactivity. They additionally found significant links between sexual risk-taking and negative emotionality and aggression.

Researchers have also consistently demonstrated an association between substance abuse and sexual risk-taking behaviors (eg. Woody, Donnell, Seage, Metzger, Marmor, Koblin, Buchbinder, Gross, Stone, & Judson, 1999; Butler & Montgomery, 2004; Cherpitel, 1999; Tapert, Aarons, Sedlar, & Brown, 2000; Wills, Vaccaro, & McNamara, 1994). Thompson, Kao, and Thomas (2005) note that individuals who consume alcohol more frequently report more sexual partners and more often endorse forgoing condoms during sex. Specifically, they report that both men and women who became intoxicated at least 3 days per week were significantly more likely to have more than one sexual partner in the previous year, which is consistent with previous research linking drug and alcohol abuse with increased risk for contracting sexually transmitted infections. While this particular study makes no assumptions about what purpose substance abuse ultimately serves (eg. affect regulation), it does lend further strength to the link between acting-out behaviors and increased risks to health.

An alternate theory suggests that there exists a combination of personality traits that render an individual more likely to engage in risk-taking behavior. ‘Sensation-seeking’ is a trait is defined by the need for increased levels of stimulation. Zuckerman and Kuhlman (1996) describe this as ‘a trait defined by the seeking of varied, novel, complex, and intense sensations and experiences and the willingness to take physical, social, legal and financial risks for the sake of such experience” (p. 1000). This might ultimately manifest as increasing amounts of drugs and alcohol or riskier sexual practices in order to achieve the desired level of sensation. Thus,

the propensity towards sensation seeking might place an individual at risk for contracting HIV or other STDs, as well as for the physical problems associated with drug and alcohol abuse. The problematic aspects of sensation-seeking are increased when this trait occurs in tandem with a tendency towards aggression. Several recent studies have addressed a link between the two (eg. Arnett, 1994; Joireman, Anderson, & Strathman, 2003). Zuckerman and Kuhlman use the term 'aggression-hostility' to describe 'the tendency towards negative interpersonal behavior', and found sensation-seeking and aggression-hostility combined to correlate significantly with sexual risk-taking. In support of the link between aggression, sensation seeking, and sexual risk taking, Hoyle, Fejfar, and Miller (2000) conducted a qualitative review of 53 recent articles and found both sensation seeking and aggression-hostility to be consistently correlated with all categories of sexual risk. Continuing the exploration of personality traits associated with risk-taking, Hudek-Knezevic, Kardum, and Krapic (2007) later examined the effects of HIV transmission knowledge, personality traits and components antisocial behavior (defined by aggression/hostility and impulsive thrill-seeking) on the tendency to take sexual risks. They found these traits to significantly and positively predict a tendency to take sexual risks, further supporting the link between these traits, negative affects, and sexual risk-taking. Zuckerman and Kuhlman have further considered sensation-seeking alongside impulsivity, and examined the behaviors of those individuals considered to have the trait of 'impulsive sensation-seeking'. They found that impulsive sensation-seeking correlated significantly with scores on a self-report measure of risk-taking behavior.

Here it is worth noting that, while not directly implicated but certainly associated with risk is the tendency towards impulsive decisions and behaviors, and much of the previously reviewed literature in fact considers the role of impulsivity in risk. Intact decision-making

ability, and specifically the capacity to inhibit impulse and delay gratification, is crucial to the ultimate tendency to engage in HIV risk-reduction behavior (e.g. using condoms, limiting the number of sexual partners). Trait impulsivity is frequently considered to be a component of sensation seeking, aggressive behavior, substance abuse, and risk taking. In considering the link between impulsivity and substance abuse, Thompson, Whitmore, Raymond, and Crowley (2006) found that a patient population dually diagnosed both with conduct disorders (characterized by impulse control issues) and substance abuse were significantly more impulsive as measured by both a behavioral task and self report. Brady, Myrick, and McElroy (1998) looked at the overlap between substance use disorders, impulse control disorders, trait impulsivity, and trait aggression, and found links between aggressive impulsivity in children and later substance abuse. Finally, Hayaki, Anderson, and Stein (2006) looked at the relationship between impulsivity and high-risk sexual behaviors in a group of chronic substance abusers, and found trait impulsivity in a large, substance-abusing sample to be significantly associated with overall sex risk.

Ultimately, it is important to consider that the theories and research I've outlined above are to a large extent overlapping and even complimentary. Just as substance abuse can be approached both as a cause of risk taking behavior and a as risk-taking behavior in its own right, it is also often considered within the definition of sensation-seeking. Indeed the links between "sensation seeking" and substance abuse were affirmed in a study by Ball, Carroll, and Rounsaville (1994). In assessing a large (n =335) sample of treatment-seeking individuals who reported current cocaine abuse, they found associations between high levels of sensation-seeking and both polysubstance abuse as well as earlier age of first use. Additionally, they determined that individuals deemed 'high sensation-seekers' were significantly more likely to endorse both a

family history and personal history of antisocial personality traits. This link is particularly significant in understanding the role of personality development in later risk-taking tendencies as it suggests that later substance abuse might in fact be a function of characteristics that have been present from an early age, and therefore deeply entrenched.

In sum, the reasons behind the development of pathological risk-taking are complicated and current understanding continues to evolve. While there may not be consensus as to what in fact causes an individual to engage in risk-taking behaviors, that these behaviors are problematic with regard to the ongoing transmission of HIV is clearly established. The following section will address these behaviors from a psychodynamic perspective with an emphasis upon the early interpersonal experiences that render an individual more or less likely to take such risks. Factors discussed previously will, going forward, be linked the dynamic conceptualization of risk-taking, and particularly the understanding of inhibition of impulses and adaptive and effective regulation of affect as crucial to an individual's ability to avoid potential risk.

Psychodynamic Considerations of Risk

Within psychodynamic tradition, there are various ways of looking at risk taking. Freud theorized a failure of thought, wherein individuals act without the intermediary step of cognition. Impulses overwhelm the poorly-established ego, and an impulsive, motoric discharge is the inevitable result. Object relations theory posits that risk taking arises in part from a failure of affect regulation. The individual is thought to discover self and to understand affect via early relationships, and if this fails to occur, he or she employs maladaptive means for managing those affects experienced as intolerable. More recently, mentalization theory understands the individual as unable to conceptualize his own mind or that of the other. Like object relations theory, mentailization understands this as a failure in early interpersonal relationships, and like

classical theory, it emphasizes the role of deliberate cognition in regulating behaviors. Each will be considered as it relates to the current study.

A theoretical link has long existed between motor activity and cognition. In its classical form, psychodynamic theory portrays risk-taking as stemming from a failure of purposeful or reasoned cognition. Freud (1913) suggested that the capacity to delay discharge was directly linked to thought development, and thus to the development of the ego. He coined the term "primary process thinking" to describe the chaotic, associative, and diffuse character of the infant's mental functioning. He contrasted this to the later developing "secondary process thinking", which is inherently more synthetic, goal directed, and reality-oriented, and is a key step in the delay of gratification. The movement from primary to secondary process involves the delay and control of impulse expression, and the substitution of symbolization, fantasy, planning, and thinking as 'experimental actions' in place of immediate response on a behavior level (Levine & Meltzoff, 1956). The role of fantasy, in particular, becomes crucial in understanding the means by which individuals gradually develop the ability to inhibit the behavioral response.

Goldwater (1994) outlined the sequence of both the 'normal' and the 'impulsive' adult. The normal adult, he suggests, experiences a perceived stress or need, has related thoughts and feelings, applicable fantasies and actions, resulting in a removal or reduction in the stress. The impulsive person, by contrast, perceives a stress or need, experiences an impulse, acts upon the impulse, and feels immediate reduction in stress; the consequences of the impulsive action are often negative and long term, however, and contribute to a cycle of stress and impulse reaction. What is missing from the impulsive individual's response is the element of fantasy as a means of interceding to inhibit the active response.

Impulsive people, Goldwater suggests, will contend with a great deal more difficulty in the navigation of situationally appropriate behavior in comparison with individuals who are able to appropriately inhibit their impulses. By his description, the individual's capacity for fantasy determines the difference between an adaptive behavioral response and one that might be less so. The ability to fantasize, he says, "…gives us control. Over both the present and the future. We're in control in the present because instead of responding to all stimuli with action, as impulsive people do, we can channel our impulses into fantasy. We don't get even, we get mad. We imagine getting even" (p. 177). This is the substitutive function of fantasy. When individuals are able to consider what it is that they want and plan accordingly, they exert a measure of control over both their present and future. This ability involves a certain measure of preparation and cognitive control that is specific to adults. Children naturally start out oriented only towards immediate gratification, and gradually develop the capacity to employ fantasy in a self-soothing manner. But unless the process of engaging the imagination and employing fantasy is pleasurable and effective, they may have less incentive to engage in it than they would to avoid it through active motor discharge – a pattern common in impulsive adults as well. It is a crucial first step in the substitutive use of fantasy that the pleasure of fantasy assumes comparable status with the pleasure of action. In order for this to occur, the hope of eventual gratification must exist. Frustration in absence of hope does not encourage fantasy formation of what the individual is forgoing, because the fantasy is painful rather than pleasurable. For the impulsive person, fantasy has not been a rewarding experience, because neither the content of the fantasy nor the process of fantasizing has been associated with gratification (Goldwater, 1994).

Delay of gratification, like impulse inhibition, is widely considered an ego strength, and the inability to delay gratification is characteristic of a variety of disorders associated with risk-

taking. Fenichel (1945) described the "impulse neurotic" and the manic-depressive psychotic in a manic state as almost totally subservient to a strong tendency for immediate gratification. Redl and Wineman (1951) connect delinquent behavior with an "ego deficit" which, among other things, includes an inability to delay gratification. Preference for immediate gratification is cited as a characteristic of the "common offender" (Friedlander, 1960), and inability to postpone gratification is emphasized as an important antecedent of "psychopathy" (Mowrer & Ullman, 1945). Additionally, a relationship between delay of gratification and social responsibility (Mischel & Giligan, 1964) has been reported. Walter Mischel (1972) and colleagues found that the “strategic allocation of attention” determined the ability to delay gratification. In examining the attentional and cognitive mechanisms at work, he found that the capacity to delay likely depends upon avoidance mechanisms that reduce frustration, in essence, distracting from the tempting urge. Ultimately, the ability to employ goal-directed cognition represents the difference between impulsive and deliberate behavior.

Where classical theory implicates failure in the trajectory of thought development required for ego formation, Object Relations theory builds upon this notion of cognition as the intermediary between impulse and action, and introduces the notion that affect plays an equally crucial role in the eventual outcome. Through the interpersonal dyad, the infant eventually comes to understand and learn to regulate otherwise overwhelming affects, and the failure of this process renders the individual vulnerable to problematic, risk-taking behavior.

Object relations theorists, notably Fairbairn (1952) and Guntrip (1969), challenged a notion central to drive theory, namely that the infant is born “pleasure seeking”; instead, they suggested, the infant is born “object seeking”; that is, the infant is born primed to seek

relationships. Winnicott (e.g., 1965, 1971) suggests that the infant whose primary caregiver is essentially attentive (responds in a "good enough" manner to his or her distress) ultimately comes to learn that his or her suffering is finite and that his or her affective states are authentic and important. This infant develops the capacity to soothe himself when distressed. Additionally, this infant learns to differentiate between self and other and to appreciate that the other is still a 'good enough' object even when he or she disappoints and frustrates. And this infant learns that if he or she communicates an affect, it will be recognized or tended to. It is this recognition that facilitates the gradual sense of the individual as capable of control of his or her own mind and subsequently, his behaviors. However, the individual who does not develop an awareness of his mind a separate from that of the other not only does not develop this ideal capacity to use thought in self-regulation, but also stands to experience interpersonal interactions as possibly painful or threatening. Mentalization considers the concept of the mind as the agent for both successful affect regulation and healthy and affirmative interpersonal interactions in understanding the perpetuation of risk-taking behavior.

With direct connections to both classical theory and object relations theory, mentalization has emerged as a means for understanding the role of cognition and affect in understanding and manipulating one's own mental states as well as those of others. Peter Fonagy and Mary Target (1998) used the term "mentalization" to describe the ability to envision the mental states of the self or other, and to understand the relationship between behavior and mental states. The capacity to mentalize, they suggest, allows the individual to accurately read an emotionally-charged situation and respond appropriately.

According to Fonagy and Bateman (2007), "the failure to voluntarily direct attention to one's own mental states may link directly to problems of impulsivity, and is also likely to

indirectly undermine the capacity to function adequately in interpersonal contexts" (p.85). The caregiver's own activities serve a regulatory function, wherein the infant learns to self-soothe with repeated modeling. In participating in mutual, responsive interactions, the caregiver prepares the infant for gradual development of control and regulation rooted internally. Citing the longitudinal work of Kochanska and colleagues (2001), Fonagy and Bateman describe the way in which infants privy to more frequent mutually responsive interactions with their mothers manifest greater self-control and less need for external regulation. These same children were also better able to internalize rules set by their mothers and ultimately respond to various commands without repeated reminders. Essentially, these interdependent communications are crucial to the development of the type of self-regulatory behaviors that allow for an appropriate, adaptive behavioral response.

Presumably, an individual who demonstrates greater capacity for mentalization is better in touch with his own and others' mental states, better able to regulate the affects linked to interpretation of these mental states, and therefore better able to temper potentially risky impulsive behaviors. Conversely, the individual who finds him or herself unable to read his or her own mental state or that of another, or who consistently attributes to others malevolent or hurtful intent, may find him or herself more frequently affectively dysregulated. Such dysregulation inherently leads to maladaptive, pathological coping behaviors.

The implicit understanding of one's own actions is an emotional state characterized by a sense of oneself as an agent; as such, this understanding is crucial to the development of the ability to mentalize. Affects relate directly to the achievement of, or failure to achieve, specific wishes or desires. Thus, beliefs about having achieved goals or desires will inevitably generate an emotional response. Awareness of our behavior as driven by mental states gives us the sense

of control that generates the subjective experience of agency, the core of a sense of identity (Fonagy, et al, 2002).

Impulsivity, then, is attributed to an individual's lack of awareness of his or her own affective states. Impulsive individuals may find themselves in states of emotional arousal that are beyond their self-control. In building upon Freud's conceptualization of the human orientation towards aggression, Fonagy (2006) makes a powerful case for the developmental progression of a propensity for violence as a failure to mentalize; as he sees it violence is perpetuated by an individual's inability to understand the other as real.

In developing the capacity for mentalization, the individual begins to understand that 'a thought is just a thought', without real power to physically do harm. If this does not occur, he stands to mistakenly attribute a thought or a feeling to physical reality. In this way is the capacity for violence, towards self or other, heightened.

Bateman and Fonagy (2006) point out that mentalization is a 'profoundly social construct' in that individuals are attentive to the emotional states of those they are with. When they temporarily lose awareness of them as 'minds', they render the other a physical object. In their work with individuals with borderline personality structure, they found that the tendency to regard another as a physical object, that is, to cease to acknowledge the mental state in the other, may make the borderline individual prone to impulsive acts of violence. On this point they note the following

> The absence of the sense of self as an agent that normal mentalizing function assures makes such individuals extremely vulnerable to humiliation. When the person they are with refuses to accept a role of complete passivity, and manifests agency, this constellation may be experienced as humiliating and threatening to a non-mentalizing

> individual functioning in psychic equivalent mode. Thus a mere look on the part of the other can trigger a violent reaction if that look suggests anything other than complete subservience. (p. 27-28)

While much of the discussion of mentalization rightly focuses upon either ability to or absence of capacity, it has recently been expanded to consider varying degrees of use of mentalization. Carla Sharp and colleagues (eg. 2008, 2011) have investigated both the spectrum of mentalizing ability and the theory that psychopathy might reflect an individual's ability to accurately mentalize but use the capacity to accurately 'read' another's mind for purposes of manipulation and control. In exploring the role of varying levels of mentalization in emotion regulation with adolescents exhibiting Borderline traits, Sharp found that individuals with these traits tended towards excessive, often overly-pejorative mentalizing (hypermentalizing), wherein the attribution of negative affects in particular were amplified. A large portion of this was attributed to deficits in affect regulation, with individuals tending towards more hypermentalization when under emotional duress.

Thus, is it easy to imagine the inability to attune to one's own mental state or to correctly gauge the mental state of the other might lead the non-mentalizing individual to feel overcome by the more primitive affective responses and thus feel compelled to immediately act. To harness control of one's mental state is to re-establish oneself as agentic and, presumably, better able to manage both affective and motoric response. It is here that the impact of one's object relations might be especially felt, as the ability to both understand and manage one's own affective experience as well as to empathize with that of the other will be crucial in behaving in such a way that facilitates both emotional and physical health. It is here also that it becomes clear that if

one's object relations are impoverished to the point that he or she feels unable to manage negative affects, drugs and alcohol might be employed as an intermediary.

Here then do the various means for understanding risk-taking again converge in such a way as to be complimentary to a degree. The individual who does not develop the capacity to use cognition in order to manage the urge to act stands not only to behave in such a way that is impulsive and perhaps dangerous, but also to behave in ways that continually place him or her in interpersonal situations which elicit negative interpersonal feedback, thus eliciting painful and perhaps overwhelming affects. Further, the individual who is unable to differentiate his or her mind from that of the other stands to experience actions on the part of the other which are contrary to his or her wants and needs as intimidating or intolerable. It is thus not difficult to imagine that this person will employ various means for regulating these heightened affects, possibly through the seeking of increased sensory experiences, including but not limited to the increasing use of substances in an attempt to moderate. While no measure has been found to perfectly predict those factors contributing to risk-taking, the Rorschach is consistently employed in the understanding of those personality traits that might render the individual more likely to engage in problematic risk-taking behaviors.

The Role of the Rorschach in Assessing Object Relations and Risk

There is an established tradition of using the Rorschach to assess varying types and degrees of risk for overt harm to both self and others (e.g. Fowler, Piers, Hilsenroth, Holdwick, & Padawer, 2001; Young & Justice, 1999). Gacano, Meloy, and colleagues (1992, 1994, 2000) have extensively researched the Rorschach protocols of perpetrators of both sexual and non-sexual violence in order to further understand traits linked with those particular offenses. However, Rorschach little research directly measures these traits as they relate to the type of

risk-taking demonstrated in the current study's population. As such, the following section will address Rorschach measures of impulsivity, affect regulation, stress tolerance, and object relations.

Rorschach (1921) pointed out that persons who saw numerous human figures in motion on the blots tended to be inhibited in their own motor activity and given to considerable imagination or fantasy or what he called 'movements in the mind's eye'. That is, Rorschach's observations, along with those of subsequent researchers, suggest that the human movement response may serve as a measure of delaying capacity and imaginative tendencies that are linked to the basic ego functions in Freud's and Fonagy et al's formulations.

The link between the human movement response on the Rorschach and ability to inhibit impulse/delay gratification has been extensively studied. Singer, Wilensky, and McCraven (1956) for example, note that: "…Rorschach's observations, and those of subsequent Rorschach workers suggest that the M response may serve as a crude measure of delaying capacity and of imaginative tendencies which are basic ego functions. A number of studies … have also supported Rorschach's observations by demonstrating that individuals whose Rorschachs contain relatively more M responses are capable of greater motor inhibition in slow-writing tasks, move about less in a waiting room situation, and tend to tell more imaginative stories to TAT pictures." (p. 376). This being the case, it stands to reason that the reverse should also hold: that individuals who report few movement responses might in fact have diminished capacity for impulse inhibition. Singer and Herman (1954) set out to determine whether consistent individual patterns emerge along a dimension that links delaying capacity, fantasy, planning ability, and various measures of motility control. Finding that "…Rorschach's Human Movement response showed significant correlations with almost all of the variables presumably measuring fantasy, planning

or delaying ability, and motor inhibition", they conclude "…persons with considerable ability to restrain impulsive response and to plan ahead and cooperate for their own good" are more likely to produce human movement responses on the Rorschach (p. 329, 1954).

Rorschach dealt at great length with his observations that persons who saw several human movement responses tended, on the one hand, to be relatively stable or inhibited in motor activity and on the other hand, rather imaginative, given to considerable inner living and creativeness or planfulness. In effect Rorschach was formulating a triadic linkage of motor perception of motion, inhibition, and imagination or inner life, linking the psychoanalytic concept of delayed gratification (inhibition of motor response) and the sensory tonic theory of vicarious functioning of motor activity and motion perception (Rapaport, 1942).

A number of studies have similarly linked human movement responses to adaptive and maladaptive behaviors in young children. Using *M* as a measure of adaptive fantasy, and specifically *M*+ (a response deemed 'good quality') to ensure that responses were well-formed and articulated, Donahue and Tuber (1993) examined the good quality human movement score of homeless children for indications of adaptive fantasy. Using the M+ score, the Ravens score (a brief nonverbal measure of intellectual ability), the subject's age and sex as independent variables, they found the M+ score to be the only one significantly negatively correlated with a measure of external distractibility. In sum, children who are able to employ fantasy (as indicated by high quality human movement responses) appear better able to adaptively manage intrusive stimulation. They thus more successfully managed the stressors that might otherwise overwhelm their capacities for planful, goal-directed thoughts and behaviors.

The capacity for adaptive fantasy has been investigated as it relates to resiliency and coping in even younger children. Meyer and Tuber (1989) used behavioral and Rorschach test

data to study young children (age 4-5) with imaginary companions. They found that these children's Rorschach protocols were characterized by a larger number of human, animal, and inanimate movement scores, as well as poorer form levels as compared to normal children of the same age. These results suggest adaptive imaginal resourcefulness was employed as a means of navigating conflictual interpersonal experience for this sample, ultimately enabling them to function better. The human movement response was considered to be a buffer against more conflictual, fantasied representations, ultimately supporting previous clinical research stressing the adaptive function of the imaginary companion (and implied capacity for fantasy) in management of conflict.

Other studies linking human movement responses with impulsivity used samples with an Attention-Deficit/Hyperactivity Disorder (ADHD) population, given the well-known propensity for impulsive behavior in such populations. Comparing the protocols of 224 children (aged 6-11) diagnosed with ADHD with a non ADHD control group, Jain, Singh, Mohanty, and Kumar (2005) found that the children with ADHD produced significantly fewer human movement responses and more color responses. Meehan, Ueng-McHale, Reynoso, Harris, Wolfson, Gomes, and Tuber (2008) produced similar findings with regard to the M response in a sample of forty-two school-aged children predominantly from minority ethnic groups and living in lower to middle socioeconomic urban communities. The results of these two recent studies provide further support for the idea that human movement responses are linked to the capacity for delay and other ideational resources that serve to lessen impulsivity.

Conversely, the use of the color on the card in a response is thought to be indicative of the extent to which affect might play a role in an individual's behavioral response. Where movement responses are traditionally associated with internal stimulation and the potential for

fantasy, Klopfer (1938) first linked the sum of the color responses (SumC) to a tendency to amplify experienced affect.

Exner (1993) noted that pure color answers (based solely on the color in the blot) may indicate lability, such that the person is unable to intercede cognitively because the affective experience is so intense. Thus, these scores are thought to be reflective of a tendency towards behavioral impulsivity. Pure color responses (C) are commensurate with emotional behaviors that essentially are out of control. Rappaport, et al. (1946), suggested that both pure color and color-dominated form responses (CF, where the answer has been formulated primarily because of the color, but also includes form use) represent a short-circuiting of delay functions. Color determinants may be considered to be a representation of the adapted, 'outer' expression, if they are subsumed by a specific form, as in a FC response. As noted by van der Kolk and Ducey (1989):

> The degree to which the subject is capable of modulated, appropriate affect is related to the degree of structuralization of the color response. A preponderance of form-dominated color responses (FC suggests a reasonable degree of control and appropriateness of affective response to external stimuli, unstructured (CF) color responses suggest a more passive relationship to one's affective life…and amorphous (pure C) color responses point to impulsivity in one's life in response to environmental stimuli, and the short-circuiting of awareness and symbolization of one's emotional response. (p. 262)

Where color is expressed in absence of or dominant to form, the response is thought to be representative of the individual's capacity for experiencing overwhelming affects. Taken together with human movement responses, the color responses provide a more comprehensive picture of an individual's ego structure and functioning.

Exner Comprehensive System Scores of Affect Regulation and Stress Tolerance.

In essence, the human movement and color responses represent opposing sides of the potential for action in the presence of affective and environmental stimuli, with the M response indicative of a capacity to engage in planful, ego-driven activity and the C responses measuring the likelihood of behavior being driven by affect. Both the ratio of the two scores and the sum of the number of responses on each side of the ratio provide valuable information about anticipated behaviors and available internal resources.

Of the ratio between number of human movement and number of chromatic color responses Gardner (1960) writes:

> …taking the movement and color responses together, it is possible to obtain an estimate of the degree of coarctation or dilation of the subject. We have also emphasized that the "direction" of the qualitative wealth is indicated by the relative prevalence of movements over colors, or vice versa. This "direction" reflects the relative emphasis placed by an individual upon thinking and the delay of action it implies, or upon free affective expression and upon the corresponding modes of control of action. (p. 265-266)

In further discussing the ratio between color and human movement, Gardner references Beck's assertion that this ratio represents "the balance of introversive against extratensive trends, of fantasy living against outward expression of the feelings" (Gardner, 1960). Klopfer and Kelley, he adds, suggested that color responses "reflect the reaction to 'stimuli from without'" in contrast to movement responses, which are resultants of '"promptings from within'" (1960). Gardner used the ratio of human movement responses and color responses as a means of determining a subject's tendency to inhibit physical responses.

The summation of human movement and color responses produces what is known as the Experience Actual (EA) Score. Where the ratio of the two suggests the balance between capacity for deliberate action and the tendency to experience intense affect, the EA score represents the sum total that is available for an individual to draw upon in order to produce the most adaptive, appropriate response. While under many circumstances, a more deliberate, ego-driven response is appropriate, there exist times when a disinhibited response would be indicative of healthy functioning. As such, a higher EA score is indicative of a greater dearth of adaptive resources.

Exner (2003) built upon Beck's (1960) notion of the EA score as a measure of success in psychotherapy. He noted that while individuals successfully completing psychotherapy did not generally produce longer Rorschach records than they did prior to treatment, they did produce higher EA scores. As such, he suggested that these increases were reflective of "the development of more inner life and affective experiences, thereby constituting a broadening of available resources" (p.244).

Lower EA scores have been associated with diagnosis of unipolar depression (Singer and Brabender, 1993) and, in children, ADHD (Harris, Reynoso, Meehan, Ueng-McHale, and Tuber, 2007). As much of recent research on impulsivity using the Rorschach is conducted with children and adolescents with ADHD, Meehan, et al. (2008) looked at the differences among ADHD and comparison children in their use of color responses. They found that the ADHD group had significantly overall lower EA scores than the comparison group. Holaday (2000) compared, among others, the EA scores of 70 children and adolescents diagnosed with either Posttraumatic Stress Disorder (PTSD) or Oppositional Defiant Disorder (ODD) for comparison with a normed non-patient sample. The diagnosed populations produced similar EA scores to one another, and significantly lower EA scores than the normed sample. As behavioral and/or

affective impulsivity are components of each of the above-mentioned diagnoses, this would suggest that EA is a useful representation of the propensity for this type of behavior. Additionally, one might infer that a paucity of internal resources places individuals at greater risk for manifesting the difficulties associated with these diagnosis.

In sum, the presence or absence of movement and color responses convey something crucial about an individual's available resources. Whereas the M side of the formula shows the extent to which individuals are able to organize their inner lives, the C side indicates the extent to which emotions are accessible. The emphasis is upon the fact that both the M and the C represent specific reactions and responses which, if tipped too far in either direction, might result in a presentation which is either quite affectively constricted or, conversely, affectively labile. When taken together, however, their balance represents the capacity for a behavioral response that is ultimately situationally appropriate and adaptive.

The EA score is further used to assess stress tolerance, and to determine the D Score and Adjusted D score. The D score represents a snapshot of an individual's capacity to tolerate stress at that moment. A person with an average D score is described as not outwardly exhibiting anxiety, tension, nervousness, or irritability. This is not to say that they are not experiencing these affects, more so that they are able to manage them in such a way as to remain in overt behavioral control. Individuals scoring in this range are thought to have average capacities to tolerate frustration and to persevere in stressful situations, such that anxiety and frustration do not consistently become problematic to the point of being pathological.

Lower D scores have been linked to the experience of stimulus overload and increased likelihood of acting out impulsively (Hartman, Clark, Morgan, Dunn, Fine, Perry, & Winsch, 1990). It is essentially a means of evaluating the degree of available resources the person has

versus the amount of disorganized events that are currently occurring beyond the person's control. Recent literature has examined the extent to which veterans diagnosed with PTSD, in particular, have been found to have lower D Scores than those observed in the general population (Sloan, Arsenault, Hilsenroth, Harvill, & Handler, 1995). In evaluating impulsivity in a sample of adolescent inpatients (N=55), Pantle, Ebner, and Hynan (1994), determined that individuals with skewed Form-Color ratios, fewer human movement responses, and lower stress-tolerance scores (the 'D' response, to be discussed later in this chapter), exhibited more failure to inhibit responses on a continuous performance task used to measure the ability to inhibit a response.

The Adjusted D score (Adj D) is a reflection of the way in which an individual might outwardly appear if situational stressors he or she might be experiencing in the moment were removed. In controlling for these factors, the Adjusted D score represents the way in which an individual might ordinarily manage stress. As mentioned previously, both the D score and the Adjusted D score have been employed in measuring combat stress in war veterans (Sloan, Arsenault, and Hilsenroth, 1995) and also with PTSD in women who have suffered physical abuse (Kaser-Boyd, 1993). With regard to scoring, an Adjusted D Score in the average range suggests adequate tolerance for stresses of everyday life. Important to note, however, is that while an average Adj D score might indicate a capacity to deal with stressful situations, this score is not a measure of affective stability. It is entirely possible that an individual might present as outwardly able to manage stress, but actually do so in such a way that is affectively damaging or pathological.

Taken together, then, these measures allow for a more complete understanding of the individuals' capacity for affect regulation and appropriate behavioral response under varying circumstances and degrees of stimulation. As this often leads to behaviors that serve as a form of

release, and thus the significant increase in the possibility of ideational or behavioral impulsiveness (Exner, 2003), these scores provide a useful measure of an individual's capacity for managing potentially defeating affects in a way that is adaptive. In further pairing these scores with a measure of object relations, a broader picture emerges of those interpersonal experiences which both shape available internal resources and contribute to the tendency for these resources to be overwhelmed.

The Mutuality of Autonomy (MOA) Scale. There is a long history of using the Rorschach to assess the quality and nature of object representations, indeed a history almost as long as the study of object relations themselves. (Hertzman & Pierce, 1947; Schachtel, 1966; Urist, 1977). The Rorschach provides a projective assessment of personality characteristics that affect personal and social adjustment. The great majority (95%) of its individual variables are coded with good or excellent reliability (Viglione & Hilsenroth, 2001). As this study focuses specifically on how movement and color responses are understood in various combinations, the following section begins with a definition of these key components and their relevance to the factors the study aims to address, followed by a description of the measure of object relations employed. Historically, the nature of human representations on the Rorschach has provided the most compelling way of assessing a subject's object representational paradigms. The human movement response (M) on the Rorschach is used for responses in which a human form is seen in motion. Exner (1986) found that a relationship exists between human movement responses and wish fulfilling activities, fantasies, active ideation, delay of impulse, and intellectual operations. Specifically, individuals with few quality human movement responses were significantly less able to delay impulsive behaviors and less likely to apply adaptive intellectual means of coping with stressors. As such, the response is thought to be linked to the capacity for

affect regulation, stress tolerance, and impulse inhibition.

Human forms, and especially Human Movement responses, are most frequently correlated with an individual's object relations (Blatt, Brenneis, Schimek, & Glick, 1976; Blatt & Lerner, 1983; Mayman, 1967). Rooted in developmental object relation theories, the Mutuality of Autonomy Scale (MOA) (Urist, 1977) was constructed primarily "to provide a Rorschach correlate of the developmental progression of separation-individuation from engulfing/fused representation to highly differentiated self-other representations" (Fowler & Erdberg, 2006, p. 5). The MOA is meant to assess an individual's sense of malevolent control and destructiveness resultant from problematic object relational experiences, and the degree to which an individual experiences interpersonal relationships as safe and based in supportive autonomy versus experiencing them as destructive or malevolent.

The MOA scale assesses the thematic content of relationships (stated or implied) between animal, inanimate, and human objects in the Rorschach. It employs a point system, ranging from 1-7, with lower scores more indicative of health and higher scores reflecting increasing malevolence and loss of boundaries and differentiation among objects. It is, however, important to note, that each level is not indicative of a figurative ladder rung, but rather a distinct category of object representations.

The MOA scale is one of the most well-known among Rorschach object relations assessment methods (Huprich & Greenberg, 2003; Stricker & Healey, 1990). As noted by Bombel, Mihura, and Meyer (2009):

> Urist (1977) developed the MOA scale as a measure of object relational developmental maturity or the degree to which individuation separation has been attained. The seven

> points, or levels, of this scale represent specific developmental levels along a dimension from empathic reciprocal relatedness to destructive envelopment of symbiotic fusion (p. 227).

In his initial interpretation and application of the measure, Urist (1977) noted that MOA scale scores correlate significantly both with inpatient's self-report, autobiographical material examined for object relational themes and also with staff impressions of the nature of their relationships to fellow patients as well as staff. In fact, many of the investigations of the MOA with adult populations have been performed with inpatient and/or significantly pathological samples. Berg , Packer, and Nunno (1993), in examining the relationship between thought disorder and object representation in psychiatric outpatients carrying diagnoses of either borderline personality disorder, narcissistic personality disorder, or schizophrenia, found a strong relationship between MOA scale pathology (malevolent) scores and thought disorder as measured by the Comprehensive System (CS; Exner, 1986). Blatt, Tuber, and Auerbach (1990) found MOA scale mean scores correlated significantly both with symptom severity and also with thought disorder in a sample of long-term psychiatric inpatients. Fowler and Erdberg (2006) describe the means by which the scale points reflect increasingly pathological fusion, dependency, and experience of the relationship with the other.

Urist (1977) found significant correlations among Rorschach data, autobiographical data, and ward-staff ratings of the quality of psychiatric inpatients' object relations; hence, that information about the quality of an individual's relationships with inner objects, as revealed in projective test data, corresponds with the quality of his or her actual object relationships as observed by others. A replication of this study (Urist & Shill, 1982) produced similar findings. An independent team of investigators (Harder, Greenwald, Wechsler, & Ritzler, 1984) found that

Urist's scale, applied to Rorschach data, differentiated among levels of severity of psychopathology as reflected by diagnosis at the time of hospitalization in a sample of individuals with histories of psychiatric hospitalization. In 2005, Bombel, Mihura, Meyer and Katko undertook a meta-analysis of MOA reliability from the 31 independent data sets of data from 35 studies. Their results suggested very high reliability for both response level reliability and protocol level reliability. Thus the MOA scale has demonstrated both strong inter-rater reliability and met acceptable levels of construct validity as well (Fowler & Erdberg, 2006). It will therefore be used in the current research to assess the quality and nature of our subjects' object representations.

The present study aims to examine the Rorschach protocols of a group at high risk for HIV, with an eye towards those responses indicative of the personality traits and interpersonal indicators that might contribute to the proliferation of potentially dangerous risk-taking behaviors. Because affect regulation and stress tolerance are thought to be linked to impulsive acting out, it was thought that the current group will score lower on measures of these traits. Object relational development is further assumed to be a crucial factor in an individual's ability to interpret and manage affective responses to interpersonal interactions, and it was therefore also theorized that this group will produce lower scores on a measure of object relational health. The results that will follow will be presented both quantitatively and qualitatively with the aim of further contributing to the understanding of the inner lives of this particular population.

As described above, risk taking and other impulsive behaviors have been linked to difficulties in affect regulation, stress tolerance and interpersonal functioning. This study investigates these variables in a sample of young men known to engage in extremely risky and dangerous behaviors.

CHAPTER TWO

METHOD

Participants

Participants were 30 HIV-negative men who have sex with men MSM (ages 18+) who: a) met DSM-IV criteria for dependence on any one of the 'club drugs' (Cocaine, Ecstasy, Crystal Methamphetamine, Ketamine, GHB); and b) reported one or more acts of unprotected insertive or receptive anal sex with a male partner of unknown or discordant serostatus in the past three months.

Participants were recruited from a randomized, controlled HIV-intervention trial, called the Young Men's Health Project (YMHP; R01 DA020366; Principal Investigator, Jeffrey Parsons, Ph.D.). Eligibility for the proposed study was determined through review of baseline assessment data from the intervention trial, which included screening for substance dependence and sexual risk behavior.

Baseline data obtained from the parent study (N=250) from which participants were drawn is representative of the sample in the study at large. With regard to use of illicit substances, the population is particularly notable for history of use, with 236 participants (94.4%) having used alcohol in the 90-days prior to baseline, and 201 (80.4%) having used cocaine. Eighty-four participants in the parent study met DSM-IV criteria for Substance Dependence Disorder – Cocaine. Data regarding substance use and risk taking in the current sample is presented in table 1.

Table 1
Risk-Taking and Substance Use, 30 Days Prior to Baseline, Current Sample

	Drug Use Days	**Heavy Drinking Days**	**High Risk Sex Acts**
Mean	7.71	7.75	5.93 **2.92
Minimum	1	0	0
Maximum	30	19	87 **18

*** One participant was deemed to be a significant enough outlier as to warrant reconsidering the mean without his sex-risk data – a mean of 2.92 and a maximum of 18 reflect these scores.*

Participants in YMHP who were eligible for the present study were flagged for follow-up. Following completion of the trial's four intervention sessions, eligible participants were approached by a research assistant or emailed and/or called by me and offered participation in this project. We also recruited participants who failed to complete the four-session intervention. Participants were paid $25 for participation. During the pilot phase of YMHP, 41% of YMHP participants met criteria for the current project. In total, Forty-nine participants were offered participation. Thirty participants were ultimately recruited, and those who did not participate either failed to respond to emails/phone calls or cited scheduling conflicts. Two participants were lost to attrition.

Setting

All tests were administered at the Center for HIV/AIDS Education Studies and Training (CHEST). CHEST is located at 250 W. 26th Street in the Chelsea neighborhood of New York City.

Procedure

The Rorschach was administered to participants using the standardized Exner method. The test consists of ten white cards on which are printed inkblots, some of which contain only black ink, and some of which contain color. Participants were told that each card contains an inkblot, and were asked to state what each image looked like to them. Responses were audio-recorded and location sheets were used in order to specify to what part of the image participants responded. All ten cards were administered to participants by me. Test protocols were scored using both Exner's Comprehensive System and Urists's Mutuality of Autonomy Scale.

Exner's Comprehensive System. John Exner published the first volume of the Comprehensive System in 1974 and the most recent revision in 2003. In 2001, Exner published updated norms for a sample of 600 nonpatient adults and these norms will be used for comparison to the current sample. Three scores and one ratio from this system related to capacity for control were employed to test the hypotheses: The Experience Actual Score, the M:Sum C ratio, the D Score, and the Adjusted D Score.

The Experience Actual Score (EA) is a measure of available resources, and represents the degree to which an individual can navigate both internal conflict and external demands in an adaptive way. It is derived by tallying the number of 'M' responses in a given protocol, and adding it to a weighted sum of all Color responses (C, CF, FC). The formula used is M + [(.05)FC +(1) CF + (1.5) C]. Higher EA Scores are indicative of a wider breadth of resources available for appropriate behavioral response.

Additionally, because the EA score can be difficult to interpret without looking at the responses that combined to produce it, the ratio of M responses to SumC responses will be qualitatively explored. Both the directionality and the magnitude of the difference between sides

of the ratio provide valuable information about the way in which an individual's internal resources will manifest.

The D score is a measure of 'state' stress-tolerance, indicative of the degree to which an individual will manage acutely elevated stress. A raw score is obtained by subtracting a measure of stimulus demands, then converting this raw score to a scaled difference score. A D score of '0' is considered in the average range, and scaled scores range from -5 to +5.

The Adjusted D score is a measure of 'trait' stress tolerance, and reflects the way an individual will generally manage stress in the absence of acute stressors. Elements related to situational phenomena are first subtracted from the previously determined D-Score. A raw Adjusted D-score value is then applied to the same table employed by the D-score conversion, and the same -5 to +5 applies.

Urist's Mutuality of Autonomy Scale. In 1977, Jeffrey Urist developed the Mutuality of Autonomy (MOA) scale as a means of assessing the maturity of object relational development as measured by the Rorschach. He assigned levels to all movement responses based on the degree to which each reflected reciprocal and autonomous versus annihilative or undifferentiated interactions. His scale consisted of seven levels of developmental maturity, with '1' representing the capacity to experience both self and other as "mutually autonomous within relationships" (Urist, 1977, p.4) and '7' representing the tendency to experience relationships in terms of the complete loss of autonomy and destruction of either the self or other. The MOA scale has demonstrated validity in the prediction of relationship quality in both patient and non-patient samples. As adult non-patient normative data do not yet exist for the MOA Scale, this sample's scores will be examined qualitatively both for overall trends and individual responses. The MOA

Scores are computed by examining the movement responses and assigning each a scale point as follows:

Benevolent Range

Scale Point 1: autonomous individuals, mutually interacting

Scale Point 2: autonomous individuals, minimally interacting or engaging

Narcissistic Range

Scale Point 3: a dependent relationship between figures, one or both reliant on the other for stability

Scale Point 4: individuals in a mirroring relationship, increasingly diminished autonomy from one another

Malevolent Range

Scale Point 5: one object forcibly controlled by another

Scale Point 6: autonomy and survival of one object severely threatened by the other

Scale Point 7: complete loss of autonomy of one or more object, resulting in death or destruction

Three raters expert on either the Exner or Urist systems scored the protocols. Two raters scored using the Exner Comprehensive System (One rater scored 30 protocols, and another scored 10 of those scored by the first rater), and a third rater scored all protocols for Urist's MOA Scale.

Hypotheses

It was predicted that subjects' scores on Rorschach measures of available resources, affect regulation and both general and situational stress tolerance would differ from those in non-clinical comparison groups. Specifically, it was hypothesized that:

1a. Scores indicating capacity to inhibit impulses and regulate affect (Experience Actual) will be lower than the non-clinical sample

1b. Scores indicating tolerance for situational stress (D-Score) will be lower than those in the non-clinical sample.

1c. Scores indicating tolerance for general stress (Adjusted D-Score) will be lower than those in the non-clinical sample.

Two aspects of the data were examined qualitatively. In order to examine the degree to which this high-risk population is characterized by affective flooding versus behavioral inhibition, ratios of human movement (M) to Color (SumC) were noted and explored. In addition, Urist Mutuality of Autonomy scores were examined qualitatively in an effort to describe the features of object relatedness in this sample.

CHAPTER THREE

RESULTS

Demographics

As described in the Methods section, the study sample was a group of individuals at increased risk for contracting HIV due to patterns of drug use and/or unprotected sex. Participants ranged in age from 22 to 46 with a mean age of 31 years. Thirty-two percent of participants identified as black or African American, 29% as Caucasian, 25% as Latino, and 14% as 'Other'. Mean level of education was fourteen years (some college), ranging from ten years to twenty years.

Data were analyzed from a total of 28 out of possible 30 participants: missing data were due to participant attrition. All twenty-eight subjects responded to all ten cards of the Rorschach and completed self-report measures on alcohol and drug use and unprotected sexual behaviors.

Data from these participants was compared to normative data drawn from the sample used to support Exner's Comprehensive System (CS), which included the protocols of 600 adult nonpatients (300 males and 300 females) equally representing five geographic areas in the United States. Mean age for the normative group was 31.73 years, and none had a significant psychiatric history (Exner, 2003).

Quantitative Measures of Affect Regulation and Stress Tolerance

Hypothesis 1a: A t-test was conducted comparing study sample scores to normative sample scores on affect regulation and impulse control. As predicted, EA scores were significantly lower in the study sample than in the normative sample, $t(32.35) = 13.829$, $p < .001$.

Hypothesis 1b: In order to test the hypothesis that study subjects would experience diminished tolerance for situational stress, their D Scores were compared to those of the normed sample. No differences were found; $t(39.29) = -1.057$, $p = .804$.

Hypothesis 1c: In order to test the hypothesis that study subjects would exhibit diminished tolerance for general stress, their Adjusted D scores were compared to those of the normed sample. No differences were found; $t(35.18) = -2.94$, $p = .770$. Table 2 provides data for hypotheses 1a, 1b, and1c.

Table 2
Exner Comprehensive System Scores of Control and Stress Tolerance

	Study Sample		**Normative Sample**		
Score	**M**	**SD**	**M**	**SD**	
Control (EA)	4.25**	1.67	8.66	2.38	df 32.25
State Stress (D)	-0.71	0.45	-0.03	0.97	df 27.32
Trait Stress (Adj D)	0.178	0.47	0.15	0.82	df 35.18

** $p < .001$

An exploratory analysis was then undertaken to investigate the possibility that within this population that ratios of human movement responses to color responses would skew towards the tendency to perceive responses that are more imbued with affect (SumC) over the tendency to regulate behavioral response ideationally (M). A relatively even balance between Movement responses (M) and Color responses (C, CF, FC) is thought to represent a more regulated inner-life and affective experience. A score weighted towards M is thought to be reflective of a capacity for inhibition and control, while a score that is weighted towards SumC is indicative of an individual's vulnerability to becoming flooded by affect and subsequently disinhibited. While 39.3% of participants produced ratios weighted towards SumC, a larger percentage (57.1%) were in fact weighted toward M (See Table 3).

Table 3
Exner Comprehensive System trends in M to SumC ratios

Ratio		
Ratio weighted to M	16	57.1%
Ratio weighted to SumC	11	39.3%
Ratio evenly weighted	1	.03%

These findings suggest that this sample is more likely to be able to navigate a potentially overwhelming affective experience and inhibit the impulse to act. However, the ratios of twelve of these protocols demonstrated a difference between M and SumC of only .5 or 1, and these twelve protocols were evenly split between weighted towards M and weighted towards SumC. If those protocols are considered to be 'even', meaning equally likely to inhibit or regulate as to become flooded, the number of individuals who are not significantly 'more likely' to behave in one way or another with regard to impulse inhibition or affective flooding becomes 13, or 46.4% of the study population. Fifteen of the protocols, or 54.6% were thus more substantially weighted in one direction or the other, two thirds (10) balanced in the direction of human movement responses. The following section will consider these results along with the object relational scores of this sample.

Object Relations – The Mutuality of Autonomy - Qualitative Review

Subjects' object relations were examined using the Mutuality of Autonomy scale. As Mutuality of Autonomy scores are categorical, the median is more useful than the mean in conveying this population's object relations. The median score of '2' (44 responses) falls within the 'benevolent' or 'healthy' range. Further, if the number of responses ranked in the benevolent range is compared to the number of responses ranked in the malevolent range, the ratio is 59: 20, or nearly 3:1. In fact, only one participant gave more malevolent responses than benevolent responses. Exactly half of the participants gave either an equal number of each, or one more

benevolent than malevolent. Seven participants gave three or more benevolent responses than malevolent responses. A breakdown of each record can be found in table 4.

Table 4
Range of Mutuality of Autonomy scores, individual records

Participant	#Benevolent	#Narcissistic	#Malevolent	Median MOA
1	1	1	1	4
2	3	0	2	2
3	2	1	2	4
4	1	0	0	1
5	1	1	0	3
6	1	0	0	1
7	2	1	1	2.5
8	1	1	1	3
9	3	0	1	2.
10	3	2	0	2
11	6	2	2	2
12	0	1	0	5
13	4	0	0	2
14	1	0	1	2
15	2	0	0	2
16	1	2	1	4
17	2	0	0	1.5
18	4	0	1	2
19	3	0	0	2
20	1	2	1	4
21	2	0	0	2
22	1	0	0	1
23	2	0	4	5
24	2	0	0	2
25	2	1	0	2
26	3	1	0	2
27	1	1	1	4
28	4	0	1	1
Total	59	17	20	

Here, the disparity between scores in the healthy range versus scores in the dependent or unhealthy range is evident, as the number of scores in the two scale points in the healthy range is more than double the five points that make up the narcissistic and malevolent ranges. Of note, only one participant gave a response from each of the scale points 1-6, and while this makes him

an outlier, his record provides a useful representation of each of the categorical scores. Scored responses from his individual record are presented below:

Record 1: Record containing responses from each of the six categories represented

Scale Point 1	*Hmmm...looks like two people high-fiving, knees together, like they're doing some kind of secret handshake or something. I see the two hands together and then the two knees so maybe it's like a secret handshake?* (Card II) In this example there is an interaction, where each individual clearly exists separate from the other, but together they are engaged in such a way that they mutually contribute to the action taking place. There is a sense that while the action could not occur with the engagement of each, each is mutually important to the interaction.
Scale Point 2	*Well it looks like two people dancing. It's a person here and a person here – here's the male, here's the female, and they're holding hands, dancing.* (Card I) *It kind of looks like a dog jumping in the air, he's kissing at something, maybe another dog.* (Card VII) *This looks like a whole bunch of bugs. Two bugs right here, maybe as if they were going over to these guys, these weird looking ones are bringing the leaves up. Like bringing them up together. Okay, you have what looks like a crab to me, maybe coming up and helping them, holding the leaf together, one leaf, they're building something. Here are two caterpillars piecing the bottom together…yeah, they're building a shelter together.* (Card X) The difference from '1' is subtle, particularly in the last response, where

	individuals are engaged in activity, but if compared to the responses in scale point '1', where the individuals are 'high-fiving' one another, it is noteworthy that in none of these responses is there acknowledgement of the other on the part of one or both/all parties. There is still a level of healthy autonomy, but in absence of interdependence.
Scale Point 3	*…they're holding on to something, like they're holding on to some type of pole.* (Card I) This response is actually the result of inquiry on the scale point '2' response about two people dancing, where they shift from dancing autonomous of one another to holding on to something for connection.
Scale Point 4	*Two people playing basketball…well, one person is playing basketball. Because they both look like they're dribbling like they're gonna throw the ball – so it has to be one person with the ball.* (Card III) In this particular response two originally distinct individuals become one person. It is not necessarily aggressive, however. Compare the above responses to Scale point '5', the first in the malevolent range, which reflects the sense that one object or individual is being forcibly controlled or aggressed upon by another.
Scale Point 5	*Don't laugh, but it's kinda funny. I see the profile of someone if I was looking up at them. And maybe someone's behind them, here, like lifting them up like they were roughhousing. Like here's the person's feet whose being lifted up. Like right here, like rough housing, like they had them in the, what's it called…? Full Nelson?* (Card IV)

	In this response, there is the threat of one or more of the players being overpowered in some way. There is clear interaction, or threat of interaction, but the mutuality is no longer evident.
Scale Point 6	*Well, to me it looks like a little Komodo Dragon that was hit by a car and squashed. Well, if you look at its face, the way a Komodo Dragon's face is, it's very skinny right here, so this is its little head and it's little whiskers….if you've ever seen one, it looks like someone ran over his poor little body.* (Card VI) The focus of the response is upon something being completely enveloped or destroyed. One or more of the players is helpless to stop the destruction and the content in each of these examples is notably aggressive.

This record is included to show examples of each MOA scale point represented by this particular population, but with the caveat that this person had the highest number of scored MOA responses, 10, as compared to the population's mean of 3.25. He is, therefore, an outlier on several levels, and as such, several more representative subgroups will necessarily be explored.

Scores in the benevolent range and scores in the malevolent range are at opposite ends of the object relations developmental spectrum. Thus, the single highest and single lowest responses scored further contribute to a more complete picture of the extent to which this sample might perceive relationships with others as interdependent, while still maintaining a sense of self. In particular, a score of 6 is the lowest score before a response is scored in the psychotic range, so a comparison of the number of '6' responses to the number of the healthiest '1' response is often useful. Table 5 provides a review of the range of scores in this particular sample.

Table 5
Mutuality of Autonomy Scores – Most and least healthy, individual records

Participant	Most Benevolent	Most Malevolent
1	2	6
2	1	6
3	2	5
4	1	--
5	2	--
6	1	--
7	2	5
8	2	6
9	1	6
10	1	6
11	1	6
12	--	5
13	1	--
14	1	6
15	2	--
16	2	5
17	1	--
18	2	6
19	1	--
20	2	6
21	2	--
22	1	--
23	1	6
24	2	--
25	2	--
26	1	--
27	2	6
28	1	6

All but one participant gave at least one response in the benevolent range, rated either a 1 or a 2, while fourteen participants gave no responses rated in the malevolent, range, rated 5, 6, or 7. These results are further suggestive of the overall health of this sample's object relational development. However, it must be noted that, despite an overall healthy looking sample, twelve records did contain at least one response scored '6', again, the most pathological score possible short of that which is categorized as psychotic. These twelve individuals might thus be

considered the 'least adapted' of this particular group. The seven records containing both a '1' and no malevolent scores whatsoever might then be considered the 'most adapted' subgroup of the larger study sample. Here it may be of use to compare both individual records and overall group risk data for those who fall into each of these two subcategories.

The following are the scored MOA responses from the record of a 'Most Adaptive' subcategory participant:

Record 2: Record containing only benevolent responses

Scale Point 1	*Looks like two little girls facing each other…they're, like, coming at each other…you know, see how their hands are back like they're coming at each other, like, "What?"* (Card VII)
Scale Point 2	*It looks like two animals playing…like they're probably play fighting because it looks like it's kind of rough, like hard play.* (Card II) *Now this looks like two monkeys…playing…or doing something. I don't know, like two monkeys or two orangutans or something.* (Card III) *These look like two lions climbing. They're climbing up something.* (Card VIII)

This record provides an interesting example because it highlights the fact that a scale point '1' interaction can be perceived as aggressive, so long as it is mutually so, and there is a sense that the interaction is interdependent. It is further notable in that it contains a relatively large number of 'benevolent' responses (four) as compared to the overall sample, for whom the mean number of benevolent responses was 2.1.

Conversely, the following are the scored responses given by an individual who gave responses ranked both benevolent and malevolent, including one response scored ‘6’.

Record 3: Record containing responses in each of three categories

Scale Point 2	*Two people climbing up a rock here. They’re two people here with their heads and legs and arms. And this just must be a rock because of the way they’re scaling it, like rock climbing.* (Card VIII)
Scale Point 4	*I can see a mirror image of two people looking at one another, putting a hand on the mirror. So I guess it’s just one person and he’s putting his hand on the mirror. Just the hand and this is probably a face and it’s like he’s wearing a hat and even kicking the mirror here – that’s why there’s the blood.* (Card II)
Scale Point 6	*I get two girls being blown back from an explosion. It just feels like they’re being blown backwards, like by a bomb down here or something. Their hair is flying up and their arms are back and they’re being propelled backward. Like they’re blowing backward really hard.* (Card VII)

In this record you see none of the mutually autonomous interactions as with the earlier records, only the autonomous ‘2’ response, the scale point ‘4’ response wherein two individuals are eventually perceived as one, and the destructive ‘6’ response in which the destruction of the players involved seems inevitable.

Interestingly, in then comparing the risk taking of these two individuals at opposite ends of the adaptive spectrum, the individual in the ‘most adaptive’ subgroup had two drug-use days, two heavy-drinking days, and one high-risk sex act, as well as control and stress tolerance scores above the sample average. The participant in the ‘least adaptive’ group reported eight drug-use days, seven heavy-drinking days, and two high-risk sex acts, and produced control and stress tolerance scores below the sample average. It was thus then predicted that this pattern would hold when considering these two subgroups all together.

Although some results were as anticipated, some unexpected findings also emerged. The following table presents a comparison of MOA subcategories with Exner Comprehensive System scores and risk:

Table 6
Most and least adaptive population mean scores of affect regulation/control, stress tolerance, and risk-taking behavior

	Most Adaptive Subgroup	Least Adaptive Subgroup
Number of Drug Use Days	4.0	9.42
Number of Heavy Drinking Days	8.5	5.42
Number of High Risk Sex Acts	1.1	3.08
Affect regulation/control (EA)	4.0	4.66
Trait Stress Tolerance (D)	1.85	-1.0
State Stress Tolerance (Adj D)	.42	0

The ‘Most Adaptive’ group did in fact evidence fewer high-risk sex acts and fewer drug use days, but they had a higher number of heavy drinking days as compared to the ‘Least Adaptive’ group. Further, while the two groups had similar state stress tolerance scores, and the ‘Most Adaptive’ group actually had markedly higher state stress tolerance scores, they also had slightly lower scores of control and affect regulation as compared to the ‘Least Adaptive’ group. While these findings were initially somewhat confusing, they might point to an important characteristic of this particular population.

In examining the Rorschachs of 40 non-patient adolescents, Tuber (1989) noted that healthier people have highest single scores that balance out their most pathological score, while in clinical samples, the malevolent scores are not balanced by benevolent scores. In the study sample, seven of the twelve records containing a ‘6’ (least adaptive’) also contained at least one ‘1’, suggesting that this subpopulation is, in fact, more balanced than first glance might suggest.

As noted earlier, even the 'Most Adapted' subgroup had a heightened area of risk as compared to the least adapted subgroup, but this is balanced by the lower degree of risk taking in other areas. Similarly, perhaps, this 'Least Adaptive' group who gave responses indicative of some unhealthy object relations is, in fact, more balanced and, as such, too exhibits protective areas of strength. This being the case, this sample's object relational development must then be considered a strength that serves a protective function with regard to risk. It may be that object relational development might play a nearly opposite role in the tendency towards risk-taking than was originally conceived. This point will be taken up in considering these findings alongside those produced using Exner's Comprehensive System as these results contribute to our current understanding of risk.

Summary

Scores measuring available resources and affect regulation using Exner's Comprehensive System were significantly lower in the study sample than in the normative sample, but scores of situational and general stress tolerance were virtually indistinguishable from those in the normative sample. The two assessments of movement/color responses and object relations scores revealed some unexpected results. An examination of the ratio of human movement responses to chromatic color responses suggests that although more than half the sample population evidenced greater likelihood of inhibition and control than of affective flooding, in only about a third was this difference markedly evident. And although object relations scores ranged from benevolent to malevolent, the overall trend was towards more healthy responses than pathological ones. Implications of these results will be presented in the discussion that follows.

CHAPTER FOUR
DISCUSSION

Introduction

The purpose of this study was to explore the quality of Rorschach scores of a risk-taking population, with the specific aim of using the Rorschach to assess the capacity to regulate affect, inhibit impulsivity, navigate both state and trait stress, and also to assess the nature of this population's quality of object relations. The ultimate goal was to determine if these individuals, a population at elevated risk for contracting HIV, in fact look different from the general population with regard to these critically important dimensions of personality and development. We assumed that early experiences will shape an individual's tendency to employ healthy, adaptive affect and stress management in a manner opposed to the pathological coping behaviors that might put them at increased risk. Ultimately, though, the results of this particular study suggest that this population was in fact equipped with notable strengths, and only one of the scores indicated lower-than-average internal resources. Analysis revealed that scores indicative of enhanced capacity for affect regulation and impulse inhibition were indeed in a range significantly lower than in Exner's normed sample. However, an examination of the scores that are combined to produce this score (human movement with a weighted sum of chromatic color) revealed that despite the lower scores, this population displays greater likelihood of impulse inhibition and affective control than overwhelming affective flooding. Further, neither scores of state or trait stress tolerance were significantly different from the normed sample. With regard to the measure of object relations, the majority of the median Mutuality of Autonomy scores fell within a range indicative of overall healthy object relations. While it was initially surprising that these scores were found to fall within the healthy range, several alternatives for interpreting this

sample's results emerged, and the following discussion will explore these current findings, address limitations to the study, and consider implications for future research.

Current Findings

In this study's population, responses measuring available internal resources with regard to affect regulation and capacity to inhibit the impulse were, as predicted, significantly lower than those in the normative sample. This score includes but is not limited to imaginal resources or capacity for fantasy, which might be employed as a means of inhibiting the impulse to act. This is particularly important given the role that affect regulation and impulse inhibition play in avoidance of risky impulsive behaviors that might render an individual vulnerable to HIV. This population's scores being lower than the normed sample does support the possibility that risky behaviors could be linked to the individual experiencing overwhelming affects and, in the absence of a cognitive intervention, impulsively acting out in response to these feelings. Given this population's self-reported substance use, it is likely that this acting-out sometimes is preceded by the use of drugs and/or alcohol, which further disinhibit the individual and contribute to the size and scope of the risk. This study's results then would suggest that within the sample population, a diminished capacity to regulate affect, with or without the catalyst of a substance, might indeed play a role in their continued risk taking.

However, these results must be interpreted with caution, as the sample population was indeed small and the overall response number very low. It is here that looking at the ratio of human movement responses to chromatic color responses proves helpful and adds another important layer to the results. While overall scores of available resources were lower than the normed, non-patient sample, the directionality of the ratio that is combined to create these scores did, in fact, skew towards the capacity for affect regulation and impulse inhibition. This suggests

that this sample might, overall, possess the capacity to navigate a potentially overwhelming affective experience by means of cognitive intervention. It is this ability, taken up both by classical and mentalization theory, which permits the individual to respond in the most behaviorally adaptive means for a given situation.

Additionally, this research also suggests that in this particular group, neither state nor trait stress tolerance played a significant role in these behaviors. The implication is that this is not a group of men that routinely feels more overwhelmed by and unable to contend with stressors than the general population, and as such, the likelihood that stress would be a catalyst for impulsive risk taking behavior becomes less potent. However, perhaps it is possible that it is not in fact stress which is a trigger for acting out, but just the opposite. Perhaps it is a positive affective experience that ultimately means the difference between behavioral inhibition versus discharge; I will explore this possibility below.

It was initially quite surprising that the object relations reflected in the responses of this particular group were as benevolent as they were. It was theorized that interpersonal interactions would be experienced as threatening, thus contributing to an experience of feeling overwhelmed by negative affect. It was thus anticipated that these individuals would provide responses indicative of experiencing relationships as imbalanced and threatening. In fact, this was not the central trend observed in their responses. While on the one hand more than half of participants did give at least one response rated ‘malevolent’, suggesting at least the capacity to experience an imbalance in relationships, data did not suggest a trend towards an overall tendency to do so. In fact, two-thirds of the responses given were within the healthy range, suggesting that the studied population generally experience interpersonal interactions as either non-threatening and/or mutually beneficial.

In trying to make sense, then, of why a population of individuals who present as healthy on these dimensions would continue to place themselves at risk, one initial thought was that with a meaningful number of participants giving at least one response scored just below a scale point 6, the lowest score possible before thought process disturbance is indicated, perhaps under *certain* circumstances these individuals might be vulnerable to interpreting interpersonal relations in a way that is imbalanced or destructive. In fact, previous research has examined whether the capacity for healthy object relations and vulnerability to pathological object relations can co-exist. In an analysis employing the MOA, Berg, Packer, and Nunno (1993) examined thought process disturbance and the structure of object relations. They ultimately concluded that, "the presence of pathological internalized object relations paradigms does not in and of itself exclude some capacity for healthy and adaptive object relations" (p 320). Likewise, the converse might be assumed to be true: an individual with otherwise seemingly healthy object relations might at times be capable of responding to interpersonal interactions in an unhealthy or maladaptive way. As such, one might consider then the possibility that the negative affective experience of a painful or problematic interpersonal interaction might lead an otherwise interpersonally 'healthy' individual to engage in behaviors that place him or her at both emotional and physical risk. Further, given this group's self-reported drug and alcohol abuse, it seems possible that use of these substances might influence the way in which they experience otherwise benign interactions. Certainly, it stands to reason that an individual using a mood-altering substance would change not just his own behavior and affective experience, but also that of the others with whom he interacts. If the individual then perceives that experience to be negative, perhaps this produces enough of a painful internal response as to become flooded by the accompanying affect.

However, it still must be noted that while this population self-reported risk-taking behaviors of substance abuse and unprotected sex, and Rorschach scores indicating capacity for compromised affect regulation and impulse inhibition, data obtained also indicate that the majority of participants were generally likely to experience interpersonal relationships as more often healthy than pathological, and they also demonstrated a solid ability to tolerate stress. Here then do this group's demographics become significant. To begin, this population was in fact one that presented as negative for HIV. While they did engage in sexual behaviors that might elevate their risk for seroconverting, the majority of the time they did not. One has only to look at the average number of substance use days to the average number of high-risk sex acts to recognize that this is a group who is capable of self-regulation, even when under the influence. Furthermore, participants for this arm of the study were drawn from the larger study only if they had completed several other pieces of the parent study, including an intake lasting approximately 1.5 to 2.5 hours, four individual sessions of motivational interviewing, and a neurocognitive battery. As such, each of these individuals was motivated to and capable of participation in what was ultimately several months' worth of research involvement. Whatever the motivation, this suggests a capacity for at least some level of gratification delay at the outset, wherein individuals could weigh the cost of one to two hours of time in research with the perceived reward. It must also be noted that while intelligence was not directly measured by this study, this population had, on average, 2 years of college education. This becomes important when considering intelligence to be a possible protective factor in this group, and one that might possibly override a tendency towards impulsive risk in some situations. This level of education also further supports the notion of this group as in possession of a somewhat more advanced degree of gratification delay. Finally, the majority of these participants were recruited from bars and nightclubs, suggesting at

the outset that this is a group that in-fact derives pleasure from and seeks interpersonal interactions. This last point then leads us to an alternative for understanding the way in which this group's overall benevolent object relations but contradictory scores of impulse inhibition might in fact play a role in their risk-taking behavior.

The initial assumption of this research was that these individuals were acting out as a means of managing intolerable affects associated with the experience of interpersonal interactions as frightening or painful. Possibly, however, this is in fact a group that, in experiencing interactions with others as generally mutual and positive, seeks out further interaction. The behaviors themselves then are not an attempt to avoid negative feelings but rather an attempt to increase positive ones. This, then, correlates with the sensation-seeking model, with individuals prone to acting without thought, wherein the power of the reward (the high of a gambling win, the rush of driving recklessly, the thrill of a sexual experience) overwhelms the known risk. As noted earlier, sensation seeking correlates with both classical analytic theory and mentalization theory, in that each respectively considers action with and without the intermediary of cognition, be it of self or other, as central to the development of the ego. Given this, then, that a measure of impulse regulation produced lower than average results, but a measure of object relations produced positive outcomes in fact makes sense. If experiences with others are generally positive, the sensation seeking individual, prone to action without thought, will in fact continue to seek them out without consideration for risk. This then begins to address the question posed earlier in this section: if this group is, as suggested by demographic variables and several scores on the Rorschach, cognitively capable of inhibiting the impulse to act, but, as suggested by self-report, takes risks regardless, there must be situational factors which come into play when these capacities are overridden. These circumstances might vary

from individual to individual, and it is certainly worth speculating that the introduction of drugs and or alcohol plays a significant role, but clearly, as participants had many more instances of drug and alcohol use than of high-risk sex, it is not the only factor.

Ultimately, the current research suggests that risk-taking in this group might be linked to an orientation towards affectively positive interpersonal interactions such that sexual risk-taking behavior occurs when positive affects override the cognitions that might otherwise intercede. However, there are, as noted, some areas for consideration with regard to generalizing the results from this particular group, and these will be addressed in the following section.

Limitations to the Current Study

The most marked limitation to the current research was that the number of participants in the study was relatively small. Though it was anticipated that testing thirty subjects would provide enough variance across measures, the low number may have contributed to the failure to produce significant findings. This might especially have been true for the state stress-tolerance scores, which were in the expected hypothesized direction.

Additionally, though the score of affect regulation and control proved significantly lower in this group than in that of the normed population, this score must take into account the relatively small average number of responses (R) given by this group. Unlike the other scores employed in this research, the Experience Actual Score is, by design, influenced by the overall number of responses in the protocol. The average number of responses was sixteen, with four individuals giving only fourteen responses, the cut-off for validity. In the United States, the mean R for nonpatient adults is 22.3 responses, with the majority of records falling between 17 and 27 answers (Exner, 2003). While it is difficult to know in what way exactly this may have influenced this study's findings, one might speculate that the relatively low number of responses

may have restricted the generalizability of this Experience Actual score results in particular. On this point, it is worthwhile speculating as to why this population's response number was so low. One possibility concerns the testing conditions themselves. Approximately half of the study's protocols were administered on days in which loud construction was taking place near the testing site. It is conceivable that this may have created a distraction for the study's participants. This might have influenced either the quality and/or the number of responses given, were conditions deemed so unpleasant as to cause discomfort. It is also worth considering the possibility that the low number responses within this population may have some clinical meaning. Although it is always worrisome to analyze by "omission", response productivity, if it is within the normal range, has been connected to a healthy capacity to invest in fantasy and imaginal activity. The restricted number of responses for this sample, then, may in and of itself suggest a more general inhibition. It is also impossible to determine what effect, if any, the possibility that this actively substance using/abusing population were in any way under the influence at the time of test administration might have on the number of responses generated, much less the type of responses generated.

Unfortunately, little research specifically addressing response number in substance abusing populations exists, and that which does was collected with dually-diagnosed populations (e.g., Johnson, 2008). In one notable exception, Vanem, Krog, and Hartmann (2007) compared the protocols of 60 substance-abusing inpatients with those of 60 non-substance abusers, and also with 38 inpatients with a primary diagnosis of schizophrenia. They found no significant differences between the substance abusing population and the non substance-abusing population, but noted that the schizophrenic group gave significantly fewer responses. However, the participants in that particular study had not used substances within three weeks of testing, thus

ruling out the possibility that they might be under the influence at the time of testing. The same cannot be said for the group in the current study, and indeed, as mentioned, nearly one third of participants tested positive for substances at the time of neurocognitive test administration. In another study by Perry, Sprock, Schaible, McDougall, Minassian, Jenkins, and Braff (1995), participants were administered a dose of amphetamine, thought to mimic the experience of acutely elevated stress. Their Rorschach scores were then compared to a control group given a placebo. The control group produced significantly fewer responses overall than the amphetamine group, suggesting that the presence of a stimulant might actually elevate response number. It's possible, then, that a depressant such as alcohol might then have the opposite effect. As indicated previously, given the baseline drug-use data, it is worth considering that the small number of responses may have been due to drug use (an issue of "state") or the pathology behind the drug use (an issue of "trait") such that this population may always be at risk for low response number, making the results by definition have less variance and thus confounding the data. But because this group was not tested for the presence of drugs or alcohol at the time of Rorschach administration, there is no way to determine what, if any, influence a participant's either being under the influence of or 'coming-down' from substances might have wielded upon this score in particular. Here the issue of sample size again becomes problematic, as the group who had the healthiest MOA scores also had a greater average number of binge drinking days – but because there were only seven participants in this subgroup, it is nearly impossible to speculate as to whether this is of any significance or merely a coincidence. These results, while certainly confusing, must be considered in the context of the very low sample size, and to speculate upon the somewhat confounding link between healthy object relational development and this particular pathological behavior would be somewhat premature.

Implications and Future Research

This study was an attempt to understand the experience of impulsivity, affect regulation, and stress tolerance in the context of developmental object relations in a population at risk for HIV. In examining the results from a measure of containing primitive experiences in the setting of an ambiguous task, predicted outcomes were, in the majority of instances, not observed. While affect regulation and control did appear compromised in comparison to the normed sample, results regarding both state and trait stress tolerance provided by the current sample suggested no significant deficits. Further, while there was some indication that under certain circumstances, they might experience interpersonal interactions as unbalanced or even threatening, this group produced scores indicative of overall healthy object relations. It is on this point that a consideration of where this might suggest future research focus begins.

To begin, this was intended to be a study of the inner lives of a group at elevated risk for HIV, and in limiting the participants to a small group of young men who have sex with men, there is a risk of contributing to the sense that this sort of risk-taking behavior is specific to being a gay or bisexual man. While it is absolutely crucial that research on risk-taking within this group remain a priority, continued object relational research with larger adult populations determined by level and/or type of risk, independent of gender and sexuality, will help further determine the role of this aspect of development in the proliferation of risk.

On that point, the establishment of adult, non-patient, normative data for the Mutuality of Autonomy Scale will allow researchers to the ability to speak more emphatically to the implications of object relations as measured by the Rorschach. In absence of this data, it is difficult to say with any certainty that, given this populations' MOA scores indicating some capacity for viewing interpersonal relations as generally healthy but at times destructive and

lacking in mutuality, it could be the situational stressor of an anxiety-provoking interpersonal experience which becomes the overriding factor in the individual's tendency to take physical risks despite awareness of possible consequences. The current results simply do not allow for this to be anything other than a qualitative exploration in absence of a population at large with which to compare scores. However, as the Rorschach scores produced by this population are indicative of generally healthy object relations and various other resources upon which to draw, the role of these strengths might provide an area for further consideration. In reviewing the results of this research, it ultimately seemed to me that if individuals in this population were to fit the description of sensation seeking, then their tendency to exhibit positive object relations might be to be expected, given the then understandable tendency to seek ever more exciting, and possibly risky, sexual experiences. As such an area for exploration might be to further seek to understand what, if any, overlap there is between object relational development and the development of sensation seeking. If in fact it were determined that individuals fit the description of the sensation-seeking personality, it would be worthwhile exploring what, if any, link exists between the development of either healthy or pathological object relations and the development of a sensation-seeking personality.

Were we to consider those factors that act as a potential catalyst in an individual's tendency to engage in risk, another area for continued research might concern this group's varied use of drugs and alcohol. In the parent study from which these participants were drawn, individual consumption ranged from using cocaine only when in a bar or nightclub setting, to abusing alcohol on a near daily basis. One participant (who was not one of the thirty selected for the current study) related needing to drink a certain amount of vodka every morning in order to feel able to go to work. Further, a number of participants also spoke to the extent to which

stimulants (specifically cocaine) helped them feel more in control of their actions, where alcohol, Ecstasy, Ketamine, and GHB left them more disinhibited. An important area for research might therefore be the difference between those individuals routinely using stimulants versus depressants versus opiates in terms of resources, object relations, and risk, in order to determine to what degree particular personality structures and available inner resources correlate with substance of choice, level or risk, or both. This would be particularly important in deriving interventions better tailored to both motivation for risk and resources available for overall harm reduction.

On the point of available resources, then a final area for exploration regards the areas in which this population evidences strength. As discussed previously, in thinking in particular about this group's overall healthy object relations, it becomes necessary to consider what, if any, role this plays in the proliferation of risky sexual behavior. Healthy object relational development very likely is a protective factor in many regards related to risk taking. However, if risky sexual behavior occurs in the context of seeking a positive experience more so than the avoidance of a negative one, it is important then to think about under what circumstances a population who also demonstrates relative strengths across other dimensions, behaves in such a way so as to put themselves at risk despite possessing the resources to override the compulsion to this behavior, and under what circumstances they do not. Participants in this research reported an average of seven to eight days of drug use and/or heavy drinking, and an average of two to three high-risk sex acts in the period of a month. A possible question might then be whether or not individuals are actively and consciously abstaining from high-risk sex and, if so, by what means? Most of these individuals, in addition to the noted high-risk sex acts, also engaged in sex that was not high risk during this same period of time, suggesting that there are circumstances under which

risk becomes less likely. This being the case, a better understanding of the events, thoughts, and affects, independent of drug and alcohol use, which precede both the low and high risk acts might help to establish a pattern for each of these behaviors. If it could be better determined by what means and using what resources even the sensation seeking individual is able to overcome impulsive engagement in risk, clinicians might better tailor interventions which employ these strengths in harm reduction. Because the current study was initially conceived with clinical implications in mind, the final section of this paper will address the way in which my understanding of the results generated by this group was ultimately advised by my participation in a therapeutic intervention already taking place within the parent study.

Clinical Reflections

In the first incarnation of this discussion, I included in the 'limitations' section the issue posed by my role as both the Rorschach administrator and a therapist on the parent project from which participants were drawn. I was fortunate to have access to this particular group through the Center for HIV Education Studies and Training, and in fact worked individually with a number of this smaller study's participants delivering therapeutic interventions aimed at harm reduction. I was, as such, privy to a great deal of anecdotal information about these participants, and these stories were undoubtedly on my mind as I put together the discussion. Therefore, while I did not actually score any of the study's protocols, my therapeutic interactions with some of the individuals who participated in this study very likely influenced the way in which I understood their experience of risk, and the way in which I ultimately struggled to present their risk taking with both respect and objectivity in this discussion.

In reviewing the conclusions at which I eventually arrived, however, my having worked individually with some of this study's participants seemed less to limit and more to aid my

ultimate understanding of what were initially unexpected findings. This was a paper that sought to better contribute to the understanding of what deficits or relative areas at weakness might place a specific population at greater risk for HIV, but in my therapeutic experience with these individuals, I was frequently struck by the strengths they brought to our work. I found so many of this study's participants to be well-related, bright, resilient, and endearing. Across demographic variables they may have looked somewhat different with regard to ethnicity, level of education, employment status, and even level of risk, but most shared the common variable that I very sincerely *enjoyed* working with them. In our therapeutic interactions, in fact, I perceived a level of relatedness in this population that might serve as a protective factor in numerous other areas in their lives.

To be certain, this is only my recollection, and seven years have passed since I began my work with this group. In 'Searching for Memory' (1996), Daniel L. Schacter writes quite convincingly about the relative fragility of our memories, and the way in which our remembrance of past events evolve as we incorporate new events into our senses of self and others. I began my work at CHEST in the summer of 2006, very soon after having moved from Virginia to New York, and I am thus certain that some of my memories of the experience are colored by the life unfolding before me at the time, as well as the various milestones to follow. And I can of course remember participants to whom I did not have such a benevolent reaction. But as I reviewed the results of this research my confusion and frustration that my findings were not as anticipated gradually evolved into relief and hope that these results were in some ways supported by the clinical experience I recall having with this group as a whole. As a therapist, it is sometimes difficult to trust that you can help another person make meaning from what you are experiencing in the room, and in this way, and it now seems fitting that my clinical work on this

project eventually helped me make meaning of the findings from this research. Confounding though their risk-taking behaviors may remain, when I consider my clinical experience with the results from the object relations measure in particular, I cannot help but think that this was a group in possession of relational strengths that might be employed in the ultimate reduction of risk.

Conclusion

The results generated by the present study have one strong implication and that is that the capacity to inhibit impulsive, risk-taking behaviors is likely the result of many different factors that might best be measured using a variety of resources. Information gleaned from past examination of the Experience Actual score suggests that the 'healthiest' individuals have a good balance between the tendency to imagine and the experience of rich and intense affects. It is, perhaps, a nice metaphor for the balance of understanding one might achieve were one to consider information produced from data obtained from a Rorschach protocol along with other measures of personality traits and organization. The current study was conceived with the idea that, in better understanding the interpersonal experience and cognitive/affective mechanisms at play in an individual's experience of impulsive risk-taking, clinicians might better adapt treatments to address the behavior. Specifically, if clinicians are able to not only predict which individual might put himself at risk for contracting HIV via risky sexual and drug-abuse behaviors, but understand what resources the individual might possess in order to mitigate that risk, clinicians might tailor interventions accordingly. For this to take place, it is imperative that we consider the risk taking behavior from as many perspectives as possible, reflecting the areas for concern, workable strengths, and overall complexity of these individuals.

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