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Editorial:

Nightmares: What are the Major Topical Areas of Scholarly Research?

In a recent bibliometric analysis on dreams, Piotrowski (2023) found that the topic of nightmares receives extensive investigatory attention. In fact, the current issue of this journal includes a study on the nightmares-suicide link (see Ellis, 2024). Yet, to date, no studies have examined the scope and breadth of research focus regarding nightmares within this voluminous body of research. To that end, a bibliometric review of published studies, over the past 25 years, on the subject matter of nightmares was undertaken in the database PsycINFO. In order to target primary studies where the topic of nightmares was a major focus of investigation, the online search was designed to select references where the terms *nightmare* or *nightmares* were in the *Title* of each reference. This strategy produced 547 journal article references (June 1998-June 2023). Based on a review of each individual study, a sole topical descriptor that best represented the main focus of each article was determined. A frequency tally, across individual subject categories, was maintained and then summed for each topical descriptor.

Table 1 presents the rank-order of investigatory topical areas, based on the procedure noted above. Interestingly, a sizable number of articles (9% of dataset) had a specific focus on pharmacological treatments (mostly Prazosin) for nightmares or for medication adverse effects that can prompt nightmares (Geldenhuys et al., 2022;Mamelak, 2020; Zhang et al., 2022). The issue of trauma-induced nightmares was also a prominent area of study with an emphasis of the PTSD-nightmare nexus (Moraczewski & McCall, 2019; Possemato et al., 2022). Several domains dealing with psychological treatment or intervention (cognitive-behavioral therapy, imagery rehearsal, and rescripting) represented, in aggregate, 71 studies (Hansen et al., 2013; Krippner & Taitz, 2017; Meador et al, 2022; Rousseau & Belleville, 2018; Spangler & Sim, 2023). Other interventional approaches receiving sparse attention were hypnosis, EMDR, and self-help. Interestingly, there was a dearth of studies which concentrated on psychoanalytic or cathartic approaches regarding treatment.

Measurement issues appear to be a major area of investigatory interest regarding nightmares (Schredl, 2002). First, there seems to be lively discussion on what constitutes a nightmare, and thus, definitional concerns challenge conceptual and research designs (see Blagrove & Haywood, 2006). Related to this issue is the wide breadth of prevalence and frequency statistics reported by many researchers (Schredl, 2009; Schredl & Reinhard, 2011; Schredl et al., 2019), which has contributed to inconsistent or contradictory results in published studies. Second, dreams recall parameters and awakening criteria can vary based on sample characteristics and research design. Third, the lack of consensus with regard to measurement is evidenced by the myriad of self-report measures which purport to evaluate or assess nightmares (24 studies focused on individual tests). Most prominent is the Nightmare Distress Questionnaire and the Nightmare Experience Scale. Of interest, projective techniques were rarely relied upon by researchers.

Perhaps reflecting the methodological concerns noted above, there has been a wide spectrum of theoretical approaches that strive to understand the nature and dynamics of the nightmare phenomenon (Ellis, 2023; Flockhart & Gackenbach, 2017). Prominent are sensory and affective conceptual frameworks (Buckingham et al., 2022; Carr & Nielsen, 2017; Carr et al., 2021), in addition to neuro-cognitive models (e.g., Paxton-Willing, 2022). Hence, this domain was highly ranked. Not surprisingly, nightmares are associated with a wide host of psychopathological disorders (Sheaves et al., 2023). Most noteworthy in the current analysis were suicide and anxiety states (Andrews & Hanna, 2020; Hedstrom et al., 2021; Rufino et al., 2020). Previous research has explored the association of personality factors on both the frequency and

severity of nightmares (Brekke et al., 2023; Gessert & Schredl, 2023; Schredl, 2021). There has been particular interest in the 5-Factor theory. Carr et al. (2022) found that neuroticism and sensory-processing sensitivity were significantly related to nightmare distress and frequency.

As listed in lower half of Table 1, several areas of investigation represented less than 3% of the dataset; most noteworthy has been an active stream of studies on nightmares related to the COVID-19 pandemic (e.g., Scarpelli et al., 2021), as well as research on the link between insomnia and nightmares (Kelly, 2022). In addition, the current analysis identified several salient topical areas that received sparse research attention (i.e., sleep deprivation, fear of sleep, circadian rhythms, Sleep apnea, substance abuse, genetics). These salient issues often appear as secondary investigatory factors across studies but were not the main focus of study in the current analysis. In addition, exploratory research on nightmare content (e.g., symbols, characters, color) is in need of further investigation.

The analysis identified 4 main domains, i.e., the emphasis on pharmaceutical treatments, neurophysiology, psychological interventions, and post-traumatic states. Moreover, it is apparent that researchers study nightmares based on a myriad of systematized theories and conceptual models which reflect the wide breadth of methodological approaches in the data collection and analysis stage of investigations (see Schredl, 2002; Zadra, 2019).These findings provide a) an overview on the scope of the scientific landscape regarding investigatory trends over time, and b) a framework for further research efforts on this troubling parasomnia (Germain, 2012).

Table 1. Rank Order of Predominant Investigatory Topics

Major Topic	*N* of articles	%
Pharmaceuticals/effects of medication	47	9.0
PTSD	40	7.5
Individual measures on the topic of nightmares	24	4.5
IRT	23	4.5
Theory/Model	21	4.0
Cognitive-behavioral therapy	20	4.0
Prevalence/Frequency	20	4.0
Measurement issues	20	4.0
Neurophysiology	19	3.5
In Children	18	3.5
Psychological therapy	16	3.0
Suicide/suicidal ideation	16	3.0
Childhood trauma	15	3.0
Mental health disorders	14	2.5
Personality	13	2.5
REM	13	2.5
Rescripting	12	2.0
CSA/Rape	11	2.0
Lucid dreaming	10	2.0
Anxiety	10	2.0
Insomnia	9	2.0
Covid-19	9	2.0
Psychoses	8	2.0

Note. Topics with more than 2% total dataset (*n*=547 articles).

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The Journal Review Process: A Cautionary Note on the Rorschach / Psychopathy Literature

Carl B. Gacono & Jason M. Smith

In Orwellian fashion, Wright and Cumming's (2005) described disturbing trends that detract from the credibility of psychological research. Writers of their time looked to an informed, ethical, and competent journal review process to balance these trends. A review of the current Rorschach/ psychopathy literature makes one realize that a plethora of largely unchallenged biases, unsound methodology, and faulty conclusions pervade the literature (Cunliffe et al., 2021; Gacono, 2016; Smith et al., 2021). Have journal editors failed to ensure that only sound, ethical, unbiased, useful research is published? Sadly, they have. Practicing clinicians must be wary, rather than trusting that editors and reviewers are informed about key issues, that reviewers offer only opinions within their areas of expertise, and that researchers have an adequate experiential knowledge base for understanding the populations or assessment instruments they study (Cunliffe et al., 2021; Gacono, 2021). In this article, we review 5 articles that illustrate these issues.

"A huge number of published investigations…are clearly marked by errors in design, implementation, and/or analysis" (p.3, Exner, 1995).

In Orwellian fashion, Wright and Cumming's (2005) text described prominent trends that detracted from the credibility of psychology:

We decry the extremism on the right, but we do not address it in this volume because that is not the problem within organized mental health today. Psychology, psychiatry, and social work have been captured by an ultraliberal agenda…we are alarmed with the damaging effect it is having on our science, our practice and our credibility (p. xiii).

Others shared their concerns, "Some of the best psychological research suffers for the sake of political correctness" (Azar, 1997, p.1). Authors looked to an informed, ethical, and competent review process to balance the problems evident in the published literature. "With controversial topics we need to make sure every person who has something to say about the topic has a chance to express their view before an article is published"(Azar, 1997, p. 1).

Our familiarity with the Rorschach / psychopathy literature suggests that a plethora of largely unchallenged biases, unsound methodology, and faulty conclusions are, unfortunately, too common (Cunliffe et al., 2021; Gacono, 2016; Smith et al., 2021). Poorly designed studies become part of meta-analytic studies (Cunliffe et al., 2012; Gacono, 2019; Smith, Gacono, Fontan et al., 2018, 2020). Disparate findings-- artifacts of poor research--create "apparent controversies," which lead to "pseudo-debates" that create an "armchair quality" in the literature (Gacono, 2016, 2019, 2021; Hare, 1998). Finding their way into the courtroom through incompetent and unethical practice, poorly designed studies create confusion that devalues the science (Gacono, 2019). These "straw person" controversies (Cunliffe et al., 2021), contribute to the belief that psychologyis a "soft" science with little to offer on substantive scholarly issues. In short, studies that fail to account for internal validity issues erode the science of psychology and obfuscate findings essential to theory and practice. Such short comings make psychologists appear unprofessional and even ridiculous (Gacono, 2021).

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Keywords: Rorschach; psychopathy; peer-review; bias; scientific method

Sadly, practicing clinicians, rather than trusting editors to be well informed, reviewers to offer opinions within their areas of expertise, or researchers to have an adequate experiential knowledge base for understanding the populations or assessment instruments they study must be wary (Cunliffe et al., 2021; Gacono, 2021). Researchers must evaluate the merits of each study they reference. Otherwise, misinformation is published with little or no challenge[1].

Two Problematic Meta-Analyses:

Meta-analyses are highly dependent on the soundness of individual studies (Glass, 1972, 176; Hunter & Schmidt, 2004). While it would be unreasonable to scrutinize every study, editors, reviewers, and clinicians should be familiar with essential parameters for a given topic. For example, a study purporting to examine "psychopaths" should not use the PCL: SV or a self-report measure to create psychopathic groups. Dimensional methodologies (absent clearly defined psychopathic groups) should not be used to make inferences about psychopathy as a category (PCL-R $\geq$ 30). Rorschach studies should be absent methodological and conceptual flaws and include group data such as mean Lambda, mean R, educational or IQ level, etc., which are necessary indices for interpreting findings. Essential parameters for reviewing these issues have been well documented (Gacono, 2016, 2019; Gacono & Gacono, 2006; Smith et al., 2021). The following studies highlight issues that should have been challenged during editorial review.

Study 1: Validity of Rorschach scores for discriminating psychopath from non-psychopaths in forensic populations: A meta-analysis (Wood et al., 2010)[2]

Wood et al. (2010) criticized the Rorschach Inkblot Test's ability to "diagnose" psychopathy and challenged several other findings (Cunliffe & Gacono, 2005; Gacono, 1988; Gacono et al., 2008; Gacono & Meloy, 1994; Meloy & Gacono, 1992;).This premise is a straw-person as well as a red herring. Psychopathy is not an accepted diagnosis, and no competent clinician would recommend using the Rorschach, PAI or MMPI to assign a nonexistent diagnosis. Conceptual problems with Wood et al.'s broader work falls into two main categories: 1) criticisms directed toward the Rorschach that are actually examples of poor clinical or forensic practice, and 2) criticisms of the Rorschach based upon an inaccurate understanding of how the instrument should be used (Gacono & Evans, 2004).

This study cited only **11** manuscripts of which **6** were unpublished doctoral dissertations, and **5** were peer review articles or book chapters. Misunderstanding of several conceptual and methodological Issues were evident.

1) Were Antisocial Personality Disorder (ASPD), sociopathy, and psychopathy treated as synonymous syndromes? Was an accepted cut-off scores (PCL-R or PCL:YV $\geq$ 30) used to form a psychopathic group?

Confusion was evident. For example, the authors portrayed a 1969 Exner study as assessing differences in Rorschach Reflection responses in a sample of "psychopaths" (Wood et al., 2010, p. 337). Exner (1969) actually used the "sociopath" category (the classification of that time) for his study. Neither the PCL-R (psychopathy) nor the current description of ASPD, were available at that time. Moreover, 27% of the Wood et al. (2010) studies failed to use the recommended PCL-R or PCL:YV cut-score ($\geq$ 30; e.g., Egozi-Profeta, 1999; Hartmann et al., 2006; Ponder, 1999;), yet findings were discussed as if there were psychopaths in the study. Siemsen (1999) used a PCL-R cut score < 27.

[1] Step 1 of the scientific method involves direct observation, exposure to the population studied or applied use of the instrument researched (Cunliffe et al., 2021; Gacono, 2021). The absence of this creates multiple issues that impact the generalizability and usefulness of findings. See Cunliffe et al. (2021) for a comprehensive discussion of these issues including a summary of the frequently occurring biases in psychological research.

[2] See Cunliffe et al. (2012) for a comprehensive review of this study.

2) Were dimensional (i.e., a continuum of scores) and categorical methodologies (i.e., as a tax on, discrete syndrome, psychopaths) used appropriately?[3]

All syndromes contain characteristic traits (dimensions) when in sufficient amounts meet a threshold for designating the syndrome. Categorical/dimensional conceptual debates represent a false dichotomy. Differing methodological approaches, however, are important for determining the types of inferences that can be made from ones findings. Categorical approaches compare psychopaths (PCL-R ≥ 30) to individuals at lower groupings and allow inferences about psychopathy as a category ("psychopaths"). Simply put, to make inferences about "psychopaths" one must have a sufficient number of psychopaths in the sample studied. In order to ensure this an appropriate independent measure (PCL-R with appropriate cut score; not a self-report measure or the PCL:SV) must be employed. Otherwise it is impossible to determine the actual number of psychopaths in the sample. Smith, Lilienfeld et al. (2013) exemplify a similar methodological failure, when inferences about psychopathy are proposed based on studies which include mostly college students. In 27% of studies a dimensional approach was utilized (Darcangelo, 1997; Egozi-Profeta, 1999; Ponder, 1999) while in 73% (i.e., Ballard, 2006; Muntz, 1999) a categorical approach was employed. All offered opinions about psychopathy.

3) Was gender or age (youth) considered? Were factors that influence Rorschach production such as gender, sexual deviance, concurrent Axis I psychosis, age, IQ, testing setting, and legal status considered as confounds?

Wood et al. (2010) combined studies of adults, female offenders (Cunliffe, 2002; Cunliffe & Gacono, 2005), youth (Ballard, 2006; Loving, 1998; Loving & Russell, 2000; Ponder, 1999; Nassen, 2008; Smith, 1995; Smith et al., 1997) and psychotic individuals (Siemsen, 1999; Welsh, 1999; Young et al., 2000). Investigators failed to assess IQ or educational level (Hartmann et al., 2006; Egozi-Profeta, 1999; Hartmann et al., 2006; Nassen, 2008) despite the impact of low IQ on both Rorschach production and psychopathy assessment (Egozi-Profeta, 1999; Hartmann et al., 2006; Nassen, 2008). Sixty-four percent of the studies did not consider the influence of these confounds (e.g., Darcangelo, 1997; Egozi-Profeta, 1999; Hartmann et al., 2006; Nassen, 2008; Muntz, 1999; Ponder, 1999; Siemsen, 1999; Welsh, 1999; Young et al., 2000).

4) Rorschach studies must report mean Lambdas and R as well as response style in order to interpret findings (Gacono, 2019).

Forty-five percent of the studies did not use an acceptable R (≥ 14) or failed to report its mean and/or range (Darcangelo, 1997; Egozi-Profeta, 1999; Hartmann et al., 2006; Heaven, 1988; Ponder, 1999; Siemsen, 1999; Welsh, 1999). Hartmann et al. (2006) used 6 brief protocols, Egozi- Profeta (1999), Siemsen (1999), Welsh (1999), and Ponder (1998) did not report R, whereas Darcangelo (1997) reported the mean and standard deviation but did not provide the range. Twenty-seven percent of the studies did not account for Lambda or response style variables. For example, Darcangelo (1997), Egozi-Profeta (1999), and Ponder (1999) failed to provide information about Lambda, EB, or Form Rorschach indices or mean IQ.

5) Psychological testing does not equal psychological assessment.

While only 9% of studies made this error, this misunderstanding has been evident throughout the Wood et al. (2010) narrative (see also Wood et al., 2003). Psychological testing, per se, is seldom

[3]All syndromes contain various dimensions or traits, as does PCL-R scorers ≥ 30 (psychopathy). To suggest otherwise represents a false uninformed dichotomy. Flawed studies offer opinions about psychopathy as a category when they do not have any "psychopaths" in their samples.

sufficient fordiagnosis or responding to a referral question. Gacono and Meloy (1994) nor other investigators (apart from Nassen, 2008 & Wood et al., 2010) characterize the Rorschach as a test to "diagnose" psychopathy. The PCL-R alone suffices to determine the presence or absence of psychopathy, while other personality instruments (MMPI-2; Butcher et al., 1989; Hathaway & McKinley, 1943; Rorschach; Exner, 2003; Rorschach, 1942) add to our clinical understanding (assessment) of the ASPD diagnosed or psychopathic individuals.

Other issues included:

1) Improper PCL-R, PCL: YV or Rorschach administration or scoring (Darcangelo, 1997; Egozi-Profeta, 1999; Muntz, 1999; Ponder, 1999).

2) Improper statistical analysis (Egozi-Profeta, 1999; Nassen, 2008). Nassen (2008)failed to assess for low IQ, provide inter-rater reliabilities based on only 5 PCL-R interviews, and used ANOVA with Rorschach variables where non-parametric procedures were needed.

Eight out of 11 studies evidenced at least one of the discussed issues. Additionally, the number of statistical comparisons within this very small sample makes the publication of this study perplexing. Wood et al. (2010) offered as a "new" insight that, "the greatest value of the Rorschach in criminal assessments is not to discriminate psychopaths from non-psychopaths but to provide a richer picture of personality dynamics" (pg. 346) --a conclusion offered by Gacono and Meloy in 1994.

Study 2: The Validity of Individual Rorschach Variables: Systematic Reviews and Meta-Analyses of the Comprehensive System (Mihura et al., 2013)[4]

The article presented 53 meta-analyses on 65 Comprehensive System Exner variables. Thirteen variables had excellent support, 17 had good support, 10 had modest support, 13 had little or no support, and 12 had no construct-relevant validity studies. Examining five potential confounds (IQ/Education level, R, Lambda/F%, interrater reliability, sample size; can impact Rorschach production) revealed that every article had failed to account for at least one ($N = 210$). Seventeen studies failed to account for 2, 85 (40.5%) for 3, 87 (41.4%) for 4, and 17 (8.1%) for 5.

1. IQ/Education level. a. Were mean and range for IQ or Educational level reported? b. Was either mean or range not presented? c. If IQ range was reported, did all participants have an IQ ≥ 80?
   a) IQ/Education level,no mean and range (N = 56; 26.7%)
   b) Missing mean or range (N = 118; 56.2%)
   c) IQ< 80 (N = 20; 9.5%)

2. Responses (R) a. Was the mean and range reported? b. Was either the mean or range not presented? C. Did all protocols have R ≥ 14?
   a) Responses (R), no mean and range (N= 108; 51.4%)
   b) Missing either mean or range (N=67: 31.9%)
   c) Studies with < 14 response protocols (N = 22; 10.5%)

3. Lambda/F% a. Were the mean and range of Lambda/F% reported? b. If mean was provided, were the means for Lambda/F% < 0.99/50%? c. If the mean Lambda/F% was > .99/.50, did the article report IQ or Education Level?
   a) Lambda/F% mean and/or range not presented (N=186,88.5%)
   b) Mean Lambda > 0.99/F% >.50 (N=40;19.0%)
   c) Mean Lambda > 0.99/F% >.50 & No IQ/Ed. level reported (N=28; 13.3%)

[4]The reader is referred to Smith, Gacono, Fontan et al. (2018, 2020) for a thorough review of this article with discussion about the choice of the criteria used to review the manuscript.

4. Interrater reliability a. Was interrater reliability reported? b. If reported, were the values adequate (ICC/κ ≥ .60 or ≥ 80% agreement)?
   a) Interrater reliability, none reported (N = 72; 34.2%)
   b) < .60 (κ/ICC) and / or 80% agreement (N = 16; 7.6%)

5. Sample size a. Did comparison groups have ≥ 20 participants?
   a) Sample size < 20 participants (N = 56; 26.7%)

With methodologically sound studies, the effect sizes may be larger, with more power given to the findings (overcoming Type I and II errors).For self-report studies (67%), 91% had three or more issues, which may have accounted for the counterintuitive findings in 13 studies. Of concern is the fact that this study was used to support the applied usage of the R-PAS, and, when the original data were requested for analysis, Mihura reported that it was no longer available in "their original format" (Smith, Gacono, Fontan et al., 2020).

Study 3: A study of "psychopathy": The theoretical validation of the Dynamic Model of Psychopathy (DMP): Toward a reformulation of the construct, assessment, and treatment of psychopathic traits (Gullhaugen et al., 2021)[5].

This study proposed a Dynamic Model of Psychopathy (DMP) to better understand psychopathic traits. The study attempts to validate an unproven model, which is then used to reformulate the construct, assessment, and treatment of psychopathic traits, based on an N of 16 research subjects. Five methodological issues (see Gacono & Smith, 2021; Gacono & Gacono, 2006) highlight the problems with this study.

1) Was the full PCL-R or PCL: YV used for creating the psychopathy group? The PCL:SV or self-report psychopathy measures (e.g., PPI-R) are not appropriate for determining psychopathy groups.

The authors did not use the PCL-R to create a psychopathy group. Their useof the PCL:SV makes it impossible to determine if there were any psychopaths in the study. Eleven male offenders scored ≥ 18 on the PCL:SV. While it is likely that no more than half (5 or 6) would have obtained a PCL-R ≥ 30, there could be zero (range was 18-23). Further, they expanded their high range to include those scoring ≥13 (N = 16; range = 13-23).

2) Was the PCL-R ≥ 30 cut-off used as the threshold for psychopathy? Lowered cut-offs are not appropriate.

The PCL-R was not administered. A PCL:SV ≥ 18 score triggers consideration to further assess for psychopathy. It does not indicate psychopathy (*N*= 11, subjects scored greater than 17).

3) Were the appropriate statistics used?

This was not an issue. However, less than 20research subjects can be problematic (Smith, Gacono, Fontan et al., 2018, 2020). This study had 16 male offenders with PCL:SV scores ≥ 13, with only 11 scoring ≥ 18 (50/50 chance of having a PCL-R ≥ 30), compared to a control sample of 35. This number is too small for developing a theoretical model and the N is not adequate for conducting the number of statistical analyses performed. The authors do acknowledge, "the relatively small sample" (Gullhaugen et al., 2021, p. 4).

4) Were gender and age accounted for? Psychopathy manifests differently depending on gender.

[5]See Gacono and Smith (2021) for a comprehensive review.

Not relevant. This sample involved males only.

5) Was the training of the researchers adequate? Training should involve 1) an accepted method as outlined in the manual, 2) supervised ratings beyond basic training, and 3) never been solely a group workshop or certification process. CBG has reviewed protocols of several "established" researchers and discovered that they were not scoring the PCL-R correctly.

Inter-rater reliability was provided (Cohen's κ = 0.770-1.00, $p < .000$); however, there was no mention of the qualifications of the researchers. The authors' use of self-report measures absent lies or social desirability scales may not be appropriate in this population. While it is unclear as to how they were used, they were also used in scoring the independent measure—the PCL:SV (criterion contamination). The authors stated, "PCL:SV rating was based on clinical interview and self-rating measures" (Gullhaugen & Nøttestad, 2012, p. 924). The use of self-report measures is not part of PCL-R or PCL: SV administration, "An interview is one of the two key data sources on which the PCL:SV is rated, the other being charts or collateral informants" (Hart et al., 1995, p. 18). There is also no mention of having used collateral information (chart review, interviewing third parties). Finally, the literature review for the Gullhaugen et al. (2021) article was not comprehensive.

Two Problematic Survey Studies:

Study 4: Rorschach scores in applied clinical practice: A survey of perceived validity by experienced clinicians (Meyer et al., (2013).[6]

This article presented a survey of practicing clinicians that "used" the Rorschach. The authors sought to understand what "experienced" clinicians think about the clinical validity of Rorschach indexes. Two hundred and fifty-three clinicians responded with 7 being excused due to having administered less than 20 Rorschach protocols (N = 246 clinician surveys).

Respondents were asked to rate the validity of 88 CS variables and 27 non-CS variables (e.g., Rorschach Defense Scales; Cooper, Perry, & Arnow, 1988) on a 5-point scale (accurate to inaccurate). The absence of comparing respondents' views with actual empirical data negates the usefulness of any conclusions about practice. For example, it was suggested the Rorschach Defense Scales (RDS) lacked clinical utility, based on this survey of which only 6% used the RDS consistently in their practice (Meyer et al., 2013). Participants judged the overall RDS system (all defenses) to have low validity (M = 0.01) and reliability (α = .24), which is inconsistent with empirical findings from a review of published studies (Smith & Gacono, 2022).

Study 5: New Versions of the MMPI and Rorschach: How Have Training Programs Responded? (Villanueva van den Hurk et al., 2023)

A recent survey study (Villanueva van den Hurk et al., 2023) opined on response training programs to newer versions of the MMPI and Rorschach (MMPI-3 & R-PAS) in three different years (2015, 2021, & 2022). The return rate of approximately 34% (1/3), 88 programs out of 259 programs was not good. Broad conclusions were offered related to how doctoral programs are teaching the MMPI and Rorschach. The fact that J. Mihura, one of the creators of the R-PAS, was involved in the survey represents a significant confound. Those more favorable to the R-PAS might participate and some favorable to the CS might not. The study also presented misinformation.

1) The R-PAS is presently being taught more than the CS.

Based on the 34% return rate, the authors report in 2015 the R-PAS was taught in 60% of the programs that returned the survey and that increased to 77% in 2022. Additionally, they state that

[6]This article was referenced in Smith and Gacono (2022).

"CS training decreased from 85% [in 2015] to 50% [in 2022]" (p. 3). There is overlap in the percentages suggesting that programs are teaching both CS and R-PAS. However, a high of 85% for CS in 2015 and a high of 77% for R-PAS in 2022, shows the Rorschach is being taught less in general. Were programs teaching the R-PAS more likely to participate in a survey where one of its creators (Dr. Mihura) participated? What are the vast majority (66%) of programs teaching?

2) The R-PAS is the updated Rorschach system.

The authors state, "because the CS was no longer evolving or responding to empirical evidence as Exner envisioned it, R-PAS was designed as a replacement for it, not a competitor or alternative to it" (p. 3). This contradicts official statements from Rorschach Workshops which do not support Exner's belief that the CS was not evolving or responding to empirical evidence. Also, while the R-PAS originators may see the R_PAS as a replacement for the CS, in actuality the CS-R would be an evolved extension of the CS.

The altered administration procedures, which are odds with both Rorschach's intent and the CS/CS-2 current ones, make it a different" inkblot method, altogether. Additionally, the R-PAS (released in 2011) lacks adequate norms, revisions, or meta-analyses to justify its applied use. Obviously, it is inaccurate to present the CS as no longer evolving (see CS-R).

3) There is no mention of the revised version of the Comprehensive System (CS-R; Exner et al., 2022).

While the CS-R was not announced/created prior to doctoral programs completing this survey (released in July 2022), this article was submitted for publication in September 2022 and revised in June 2023. The creators of R-PAS have been aware of the CS-R through multiple presentations at professional conferences they attended.

4) Teaching older versions of the Rorschach is considered poor practice.

The authors insinuate that teaching the CS is poor practice, "we were surprised to find that many programs were still teaching students to use previous test versions" (p. 3) like the CS (see point #3).They discuss APA ethics about using obsolete tests (Standard 9.08b) and American Educational Research Association's stance that if an older version is used one needs to justify why it is equivalent to the newer version. This line of reasoning makes little sense as both the CS and CS-R have the same principles, foundations, indices, variables, ratios, interpretive principles, etc. As the updated version of the CS, does display the Rorschach data somewhat differently, contains some newer scoring, and offers cross-culturally relevant comparative data. One is on solid footing, however, using the CS-R if they are proficient with the CS.

5) New norms are one reason to use a newer version of a test.

The authors suggest that new norms are used to justify using a newer test version. However, they then clarify, "At the same time, the newness of norms should not be the only determining factor—if the new and old norms are essentially equivalent, an argument for their usage is weakened" (p. 3). It should be noted that we agree with the necessity of having new norms and comparative data when offering a psychological test for applied comparative data and norms. Because the CS and CS-R administration procedures are consistent, it is appropriate to utilize the same protocols for comparative data. It should be noted that the CS-R has added multiple sets of cross-cultural normative data that can be quickly compared with the examinee's protocol. In this regard there are no extensive R-PAS norms or comparative data, only those created from modified CS administrations (Gacono & Smith, 2023).

6) Selection bias was the only bias present in their study.

The authors state "selection biases may have been present given Joni L. Mihura's name was included on the survey email given her association with the R-PAS. If present, this selection bias would predominantly influence the degree to which the Rorschach was covered in programs' training"(p. 4). However, the article is written to suggest that R-PAS is the only new version of the Rorschach which is not only incorrect but likely a biased position (Cunliffe et al., 2021). Mihura is the contact person for the article and should have disclosed that she is a creator of R-PAS[7].

Conclusion:

Has anything improved since Exner's (1995) offered his concerns? We think not. The disturbing trends Wright and Cummings (2005) wrote about have not only continued but increased. In general, the profession has witnessed a shift from science to social advocacy even within groups such as the Society for Personality Assessment (SPA) which historically have been anchored with the rigors of science. Coupled with potential failures in the journal review process (see Portrowski, 2019), we contend that Exner's (1995) cautions remain relevant.

How could an 11 study meta-analysis (Wood et al., 2010) containing 6 unpublished doctoral dissertations with the resultant conclusions be published? The only possible explanation was a review influenced by the popular trend at that time—Rorschach bashing (Gacono & Evans, 2006).

Of note two of the articles in our commentary were published in the Journal of Personality Assessment (JPA; Meyer et al., 2013; Villanueva, 2023). This journal, associated with SPA, was reliable for most of its history. While empirical evaluation is necessary, we have noted a trend toward preferencing academic researchers, the R-PAS, and several authors associated with the R-PAS. For both scientific and ethical reasons we recommend a thorough evaluation of JPA (extend Piotrowski's, 2019 study).

A recent JPA article highlights these issues (Tess, Sellbom, & de Ruiter, 2022). This special issue on personality assessment in legal contexts purports to provide information for building a cohesive evidence base for legal admissibility regarding some commonly used psychological assessment instrument. It included articles on the Rorschach and the PCL-R. The Rorschach article were written by Donald J. Viglione, Corine de Ruiter, Christopher M. King, Gregory J. Meyer, Aaron J. Kivisto, Benjamin A. Rubin, and John Hunsley while the PCL-R article was written by David De Matteoand Mark E. Oliver. In additional to a preference toward the R-PAS and its authors, it should be noted that Dr. Smith and I along with Dr. Ted Cunliffe and Dr. Marvin Acklinhad proposed to write these 2 articles. The four of us are well published practicing forensic psychologists (at least three of us with advanced Board certifications, 2 with fellow status in SPA), experts in these areas, who have testified in court related to these instruments and their use in specific cases. We also included a fifth author. She was a Federal prosecuting attorney who routinely cross examines psychologists related to psychological assessment and testing. The five of us were turned down. One might ask what group of authors would have more to offer related to an applied issue?

Articles exist that can guide the editor, reviewers, and clinicians when appropriate. Blind faith, however, has never been more dangerous. As always, we recommend that clinicians educate themselves and evaluate the merit of each study, including ours.

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Use of Projective Techniques with Children: A Review of Contemporary Research Studies

Chris Piotrowski

A review of the mental health literature clearly indicates that both clinicians and researchers have, for many decades, considered various projective measures as suitable and pragmatic assessment instruments in the mental health evaluation of children. The aim of the current study is to present a brief overview of recent scholarship reflected in this body of literature on projective assessment with child samples, based on a bibliographic analysis. To that end, a comprehensive search of the database *PsycINFO* identified 250 peer-reviewed articles with a focus on projective tests and children. Of these, the author selected 38 studies or key references cited in these publications. Based on an aggregated analysis of this contemporary bibliographic dataset (2000-2022, inclusive), the author contends that projective techniques have been found to have empirical support for critical clinical issues such as the ability to reveal latent psychodynamics, identify cognitive deficits, and differentiate select diagnostic groups in children and pediatric populations. These attributes of projective measures are a key feature in the assessment of children, where issues such as developmental milestones, social adaptations, emotion regulation, and verbal expression are central clinical challenges. A select historical bibliography of key studies and books is provided.

Introduction:

From an historical perspective, projective techniques were in the limelight in the mid-20th century, evident by exponential levels of both research and clinical attention (Bolander, 1977; Bram & Peebles, 2014; Frauenhoffer et al., 1998; Lemov, 2011; Levy, 1949; Murstein, 1965; Piotrowski, 2022, 2015a; Reiman, 1950). And much of this scholarly attention has had a focus on the use of projective measures in the psychological assessment of children (see Aaron, 1967; Acklin, 1995; Bernadette, 2008; Bowyer et al., 1966; Brody & Carter, 1982; Constantino et al., 1992; Goldfarb, 1949; Haworth, 1962; Krahn, 1985; Mehr, 1952; Parkin, 2001; Rabin, 1986; Reynolds & Kamphaus, 1990; Sivec & Hilsenroth, 1994). This body of literature includes thematic tests (Breen, 1998; Chandler et al., 1989; Lis et al., 2005; Schroth, 1979), sentence completion measures (Dykens et al., 2007; Lanyon, 1971; Westenberg, 2002), and drawing techniques (Bender & Wolfson, 1943; Jolley, 2010; Koppitz, 1966; Manning, 1987; Nava, 1965; Piotrowski, 2016; Richey, 1965; Senol & Ochilbek, 2020; Tukel et al., 2018;Woolford et al., 2015). Interestingly, there are copious studies on the application of projective tests in the psychological evaluation of children in the context of allegations of sexual abuse (Babiker, 1993; Garb et al., 2000; West, 1998).

A host of survey data of mental health professionals on the topic of psychological testing with children, over the past 4 decades, indicate that projective tests have been and continue to be frequently relied upon in practice settings (Hojnoski et al., 2006; Holaday et al., 2000; Hutton et al., 1992; Kennedy et al., 1994; Oakland et al., 2016; Stinnett et al., 1994). Moreover, copious survey findings from professional training sites with an emphasis on child assessment confirm graduate level instruction on projective tests (Elbert & Holden, 1987; Piotrowski, 2015b; Piotrowski & Belter, 1999; Prout, 1983; Stedman et al., 2018; Tuma & Pratt, 1982; Wilson & Reschly, 1996).

While much of this literature is somewhat dated, it would be worthwhile to review the extent of investigatory focus on projective techniques reflected in recent research on children. To that end, the aim of current study is to provide a brief synopsis of contemporary studies (2000-2022) with a focus on the applications of projective tests with child/pediatric samples.

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Keywords: Children, Assessment, Testing, Historical, Projective techniques

Bibliometric Review:

Bibliometric analysis entails the quantitative study of patterns reflected in bibliographic publications. Such methodological designs allow investigators to identify a select body of research literature indexed in scholarly repositories (Krippendorff, 2012). Since the focus of the current study is on projective techniques in reference to children, a Boolean strategy was employed, based on *keyword*, for year 2000-2022 inclusive, with the search terms 'projective techniques', 'Rorschach', 'House-Tree-Person', 'Draw-A-Person', 'Human-Figure-Drawings', 'Kinetic Family Drawing', 'Children's Apperception Test', 'Sentence Completion','TEMAS', 'Hand Test', and 'Somatic Inkblot Series'. The repository of scholarship was the database *PsycINFO*. Cumulatively, the search output produced 250 previewed articles. So as to provide a contemporary perspective, these results limited the output for research over the last 2 decades (see Table 1). Keep in mind that this body of references does not include books, book chapters, or dissertations specifically on these projective measures. Of this set of articles, the author scanned the bibliographic output and selected key studies that reflected the literature on the use of various projective measures with children. Based on this procedure and review, Table 2 provides a brief synopsis of 38 key studies.

Table 1. Number of Articles (2000-2022) with Test/Child or Children as a Keyword in *PsycINFO*

Measure	***Journal Articles***
	N
Rorschach	97
Human figure drawings	28
Draw-A-Person	17
Sentence Completion	12
House-Tree-Person	9
Somatic Inkblot Series	8
Children's Apperception Test	7
Kinetic Family drawings	7
Hand Test	6
TEMAS	6

Brief Overview of Key Studies:

Table 2 presents 38 key studies based on a) the search of *PsycINFO*, where the Boolean online search had a focus on the use of projective techniques with children or child case studies, and b) a selective review of several references obtained by scanning the bibliography of articles from the search. While most of these studies are empirical in nature, several report on case study findings. Moreover, it must be noted that in addition to clinicians leading these research efforts, a number of studies are led by researchers in the sub-field of school psychology.

In support of the credibility regarding these investigations concerning children is that most of the studies are published in leading journals in the field of psychology. Moreover, almost all the major projective tests are represented in this review of contemporary research. Moreover, it must be kept in mind that these studies appear as published articles; the online search did not access research on projective measures that may have been presented at professional conferences, non published studies that never see the light of day (see 'File Drawer' issue; Wagner, 2021). Hence, the volume of recent scholarship on projective assessment with children can be estimated to be larger than presented in the current review.

Table 2. Recent Studies with a Focus on the Use of Projective Techniques with Children

Study	*Projective Measures*	*Major Finding*
Lagunes et al. (2022)	Draw-A-Person	25% of pre-school children showed deficits on the Psychological Function Index; SES was a significant factor.
Simon & Claudon (2021)	Children's Apperception Test	Authors introduce a novel contemporary scoring system for the CAT.
Yu & Lee (2021)	Rorschach	In a case study of a 6-year-old boy, the Rorschach provided a clinical medium for enhancing therapeutic exploration.
Magnusson et al. (2021)	Drawings-Talk technique	In investigatory police interviews with pre-school age children, drawings may impair recall accuracy with suggestive prompts.
Navarro et al. (2020)	Various projective tests	Study concludes that the validity of projective tests has been inconsistent for the evaluation of sexually abused children.
De Michele et al. (2019)	Rorschach	The Rorschach Trauma Content Index was diagnostic in identification of child sexual abuse.
Borsa (2019)	Draw-A-Person	The DAP items such as 'presence of teeth', 'exaggerated shoulders', and 'clawed fingers' were indicators for aggression.
Resende et al. (2019)	Rorschach	The Rorschach Developmental Index (DI) was found to be strongly associated with nonverbal intelligence; the DI is effective in assessing various aspects of children's psychological development.
Celik et al. (2019)	Draw-A-Person	In a sample of children who migrated from their home country due to war, anxiety scores from the DAP were elevated compared to a control group.
Roysircar et al. (2017)	House-Tree-Person	In a sample of children who experienced post-2010 earthquake, the HTP proved useful in assessing resiliency and vulnerability.
Cronin et al. (2017)	Human Figure Drawing	In this study of cognitive development in pre-teen children, HFDs showed variability in validity estimates.
Backos & Samuelson (2017)	Kinetic Family Drawings (KFD) and DAP: Screening Procedure for Emotional Disturbance (DAP: SPED)	The KFD was more effective than the DAP in identification of children exposed to intimate partner violence.
Meyer (2016)	Rorschach	Rorschach scores were linked with neuropsychological perceptual synthesis skills (perceptual accuracy and perceptual representations), and verbal abilities.
Jothimani & Kumar (2016)	DAP case study	The DAP was useful in expressing educational concerns and behavioral problems.
Khorshidi et al. (2016)	Draw-A-Person	The authors found a significant relationship

		between the drawing characteristics (signs/patterns) and both normal and abnormal psychological issues in young boys.
Saraiva & Ferreira (2016)	Rorschach	Study compared 3 personality styles (anti-social, oppositional-defiant, hyperkinetic) in children; behavioral problems were a function of style.
Brechet (2015)	Draw-A-Person	In this study on representation of romantic love, latency-age children showed graphic indicators of love; Girls expressed more 'signs' of love than boys.
Bonoti & Misalidi (2015)	Human Figure Drawings	In this study on emotional expressiveness, children showed graphic contextual HFD cues for basic emotions, as opposed to 'social' emotions, such as shame or pride.
Zhao et al. (2015)	House-Tree-Person	Findings showed drawing 'signs' such as a lack of windows, round collar, and arms of variable thickness, were related to pupils' somatization symptoms.
Reese et al. (2014)	Rorschach	Study compared Exner's CS with the modern R-PAS in children; Few differences were found, other than fewer responses noted on for the R-PAS.
Li et al. (2014)	'Synthetic' House-Tree-Person	With children with high-functioning autism, the S-HTP identified deficiencies in social interaction, self-concept, and family relationships.
Brainard et al. (2014)	Rorschach	Study concluded that learning-disabled (versus non-learning disabled) children have deficits in their ability to perceive, interpret, and coordinate information from their environment.
Storey et al. (2014)	Rorschach and other projective measures	Projective assessment is key to determination of mental impairment, learning disabilities, diagnostics, and treatment planning of young children from disadvantaged communities.
Sanyal (2013)	Somatic Inkblot Series-II	For emotionally withdrawn children, SIS-II provides a vehicle to penetrate in to the unconscious in a non-threatening manner.
Campos (2012)	Rorschach	In a clinical case study of a young boy (age 7), the Rorschach was therapeutically useful in dealing with his grandfather's traumatic death.
Azam & Aftab (2012)	Hand Test	The findings showed significant sex differences on aggression, acting-out, and problem-solving styles.
Amil et al. (2010)	Rorschach, Human-Figure-Drawings, Hand Test, Kinetic Family Drawings	In the assessment of child sexual abuse, the findings indicated that projective techniques had limited utility.
Once & Wise (2010)	Story-Telling techniques	In studying the impact of the 1999 Turkish earthquake, young children (age 7) showed

		trauma-related symptoms 2 years post-disaster.
Alreja et al. (2009)	Somatic Inkblot Series-II	In studying 30 mentally retarded children, the SIS-II differentiated number of responses, human/animal movement, rejection of images, and pathological anatomy.
Miller & Nickerson (2007)	Various projective techniques	Although projective tests are used by school psychologists, the authors question the validity of these methods.
Hojnoski et al. (2006)	Various projective measures	School psychologists rely on a host of projective tests, particularly in the assessment of socio-emotional evaluation of children.
Blanchouin et al. (2005)	House-Tree-Person/Draw-A-Person	These projective tests contribute to several psychopathological signs expressed by sexual abused children.
Smith et al. (2005)	Hand Test	The Hand Test differentiated medically ill versus psychologically disturbed children on aggression, withdrawal, and psychopathology.
Tressoldi et al. (2004)	Various projective tests	Based on inadequate norms on Italian populations, the authors contend that projective measures should be limited to idiographic assessment, not for use in legal settings.
Savage (2003)	Somatic Inkblot Series (SIS)	Case study of a young boy (age 14) and his psychological reaction to his parent's divorce; The SIS proved useful in providing therapeutic avenues to pursue.
Seitz (2001)	Projective tests	Authors discuss several of the drawbacks of projective tests in reference to children's pictorial abilities.
Veltman & Bowne (2000)	Projective drawings	Drawings are useful in evaluation of child abuse/maltreatment.
Jacquemin et al. (2000)	Various projective tests	Projective measures have utility in pediatric settings.

Conclusion:

Despite the fact that both criticisms and limitations regarding projective tests continue to the present day (see Jurovaty and colleagues, 2022), the current review offers supportive evidence on the clinical utility of projective techniques in the assessment of children. Based on scholarly evidence, projective measures can serve as key assessment tools in the evaluation of mental health factors in children, including insights into the nature of personality characteristics, dynamics of inner mental life, etiology of copious psychopathologies, salient factors in behavior disorders, and deficits in social relationships.

At the same time, this review supplants bibliographic evidence that projective techniques, despite perennial criticisms noted in the literature, continue to attract both clinical and research attention across a myriad of patient populations (e.g., Piotrowski, 2022). In fact, the most recent test use survey of practicing psychologists (*n*=293) confirms that 55% of these practitioners rely on at least 1 projective test (including the H-T-P, DAP, Kinetic Family Drawing, and the Children's Apperception Test; see Hanigan, 2021). Hence, the evidence is clear that although projective tests may have lost their historical stature in the field of psychological assessment, these measures are not scientifically moribund (see Piotrowski, 2019, for discussion). However, continued usage with specific projective tests will largely depend on their status in

professional training programs worldwide (see Piotrowski, 2015b, for a review), as well as continued presence in the contemporary psychological literature through books in the field of mental health assessment (e.g., Dubey et al., 2019; Weiner & Kleiger, 2021), including texts on psychological testing of children (Smith & Handler, 2015).

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The Alarming Nightmare-Suicide Link: Evidence, Theories, and Implications for Treatment

Leslie Ellis

A robust link has been established between frequent nightmares and increased risk of suicide, both in adult and adolescent populations. Yet nightmares remain vastly undertreated for a confluence of reasons: patients rarely talk about their nightmares, clinicians rarely ask about them, and too few clinicians are trained to treat disturbing dreams. Current clinical research shows that nightmares are not only associated with posttraumatic stress disorder (PTSD), but also are more prevalent in most psychiatric disorders. There are myriad reasons for clinicians to inquire about and treat nightmares: Patterns of disturbed dreaming, and content of nightmares can provide warning signs of suicide; dream content can aid in diagnosis, treatment, and assessment of response to treatment; and there are established, evidence-based treatments for nightmares that appear to reduce nightmare frequency and distress, as well as other symptoms of post-traumatic stress. Mechanisms of action remain unclear, and the range of treatment options could be expanded, so further research is needed. In the meantime, viable nightmare screening and treatment options currently exist that have the potential to mitigate suicide risk. This review summarizes the extant body of research in this clinical area.

Introduction:

A robust link has been established between frequent nightmares and elevated suicide risk, both in adult and adolescent populations independent of other known risk factors such as insomnia, PTSD, anxiety and depression (Sjöström, Waern, & Hetta, 2007). The presence of frequent nightmares, defined as frightening or disturbing dreams that disrupt sleep, can alert clinicians to suicide risk. For example, one study tracked 165 inpatients who had previously attempted suicide and found that frequent nightmares resulted in a *four-fold increase* in the likelihood of future attempts (Sjöström, Hetta, & Waern, 2009). Yet most clinicians do not ask about nightmares, and those who suffer from them often do not report them (Nadorff, Nadorrf, & Germain, 2015). Hence, this leaves a highly vulnerable population vastly undertreated despite the availability of evidence-based treatments.

Suicide is a leading cause of death, claiming more than 800,000 lives each year (World Health Organization, 2019). Suicide rates have risen every decade for the past 50 years, and yet clinicians have not improved their ability to predict suicidal behaviours (Franklin et al., 2017). Researchers who study the role nightmares play in suicide advocate for including nightmare screening and treatment as a means of mitigating suicide risk (e.g., Geoffroy, 2023; Titus et al., 2018). Although there is still a need for greater understanding of the relationship between nightmares and suicide, a review of the research suggests that inquiring about and treating nightmares does no harm, but has the potential to help in novel ways, with the devastating problem of suicide.

Nightmares Under-reported and Under-Treated

"Nightmares are a robust and modifiable predictor of increased suicidality and poor psychiatric outcomes, yet nightmare screening and treatment remain rare," according to Nadorff, Nadorff and Germain (2015). These authors conducted two studies into what proportion of nightmare sufferers report them to a health care provider, and they also examined reasons for low reporting. In a student sample of 747 student participants, Nadorff et al. (2015) found that as few as 11% reported their nightmares to a health care provider. They also found that less than one-third of these believed nightmares are treatable, and those with

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the highest nightmare distress were least likely to believe treatment is possible. These researchers also studied a more general sample, and although more (29.6%) had reported their nightmares to a health care professional, only 20 to 30% of those who sought treatment felt they benefited from it.

Summary of Epidemiological Studies: Nightmares as Predictors of Suicide

A recent bibliometric study found that nightmares are a major clinical area of research investigation (see Piotrowski, 2023). The following research summary demonstrates a robust link between nightmares and suicide – including suicidal ideation, and suicide attempts. Other factors linking nightmares with suicide include trauma history, self-harm, and poor sleep quality. Akkaaoui and colleagues (2020) conducted a review of 1145 articles (24 were retained) on the relationship between nightmares and psychiatric illness, concluding that chronic nightmares affect up to 70% of patients with personality or post-traumatic stress disorders. In addition, nightmares occur more than twice as often in patients with mood or psychotic disorders compared with healthy controls. The researchers concluded that nightmares are overrepresented in these clinical populations. These findings highlight the importance of considering nightmares as a potential risk factor for suicide and emphasize the need for diagnosis and nightmare treatment. Geoffroy (2023) stated that the simple question, "How are you dreaming?" should be included in suicide risk assessment, suggesting this change could improve screening for one of the leading causes of death worldwide.

Liu et al. (2020) found that nightmares are key contributing factors in suicidality, with medium effect sizes for both suicide attempts and death via suicide. While most studies found an emphasis on the link between nightmare frequency and suicide risk, Lee and Suh's (2016) study of 280 students with nightmares found that distress had a greater impact than frequency on suicidal ideation, especially for women. They recommend that both frequency and distress be evaluated in suicide risk assessment in clinical settings. A study by Nadorff et al. (2015) found that nightmares were a stronger predictor of suicidal ideation than depressive symptoms. Those with frequent nightmares were more likely to endorse thoughts of self-harm or suicide. Another study by Nadorff et al. (2014) found that individuals who reported more frequent nightmares had a higher likelihood of engaging in suicidal ideation and behaviors. This suggests that the intensity and persistence of nightmares may have implications for the severity of suicidal thoughts and actions. Tanskanen et al. (2001) conducted the first study to report a direct and graded association between nightmare frequency and death by suicide. Using a Finnish prospective study of 36,211 people drawn from the general population, researchers found a direct relationship between nightmare frequency and suicide risk: the risk was 57% higher for those with occasional nightmares and 105% higher for those with frequent nightmares compared with those reporting no nightmares. Contrary to the above evidence, Hedström and colleagues (2021) used a prospective cohort study of more than 40,000 participants to examine the relationship between nightmares, suicide and depression and found no difference in suicide rates between those with or without nightmares. They did find a higher incidence of depression among nightmare sufferers and recommend treatment of both nightmares and depression when these conditions co-occur.

Sjöström et al. (2007) reported that frequent nightmares can increase the risk of suicide by more than 400%. They tracked 165 patients admitted to hospital following a suicide attempt, and noted that 89% experienced sleep disturbance, and 66% reported nightmares. Those with nightmares were found to have five times greater risk for high suicidality, and this was after adjusting for psychiatric diagnosis (depression, PTSD) and for symptom intensity. The authors wrote, "Of the different sleep variables related to suicidality, nightmares had the strongest association" (p. 94). These investigators recommend that clinicians assessing suicidal patients include inquiry into sleep and nightmares. They noted that a deficient serotonergic system which causes disturbed REM sleep may link nightmares with suicidal behaviour. An earlier study (Bernert et al., 2005) found similar results with a sample of 176 outpatients. They examined sleep disturbances and nightmares in relation to suicide risk and after conducting a regression analysis, only

nightmares remained related to suicidality, with the link between nightmares and suicide slightly higher for women. Agargun (2005) noted some limitations with this study, in particular the absence of patients with panic disorder and dissociative disorder; both are associated with nightmares and suicide, and in the latter, nightmares may have some adaptive value (Agargun et al., 2003). The main finding, however, is noteworthy: that after controlling for depressive symptoms, Benert's study found that *only nightmares* (and not depression) were associated with suicidal ideation. Bernert and colleagues (2015) conducted a review of the literature and found there is an evidence base to suggest sleep disturbances (including nightmares) are a suicide risk factor. A caveat is the considerable variability in study design, and the need for more investigation. Their conclusion states that "sleep disturbances, such as insomnia and nightmare symptoms may serve as modifiable, empirical risk factors for suicidal behaviors, presenting *a unique opportunity for suicide prevention*" (p. 8, emphasis added). In an earlier review of the literature on sleep disturbances and suicide risk, Bernert and colleagues (2007) found that suicidal ideation and behaviours are linked with sleep complaints and noted a "unique association between nightmares and suicidal ideation" (p. 1) in several cross-sectional studies. They also noted that "unlike other suicidal risk factors, sleep complaints may be particularly amenable to treatment" (p. 1).

Nightmare-Suicide Link Extends to Adolescents

The results from adult populations have been extended to adolescents in several studies. For example, Liu and colleagues (2019) conducted longitudinal study of 7,072 adolescents and found frequent nightmares to be independently associated with both subsequent suicide attempts and non-suicidal self-injury. Suicide risk increases with higher nightmare frequency and distress, and that this was only partially mediated by depression in a study with 6,923 adolescent participants (Liu et al., 2021). Nightmare distress has been identified as a key risk factor in suicide for depressed adolescents (Song et al., 2022). Corroborating this finding, Wang and colleagues (2023) found that in adolescents with psychiatric disorders, frequent nightmares were associated with significantly greater depression and nightmare distress. Their analysis showed nightmare distress fully mediated the correlation between frequent nightmares and depression and suggests this should be a target for treatment.

In a recent study based in Montreal, Canada, Gauchat and colleagues (2021) studied both the dreams and suicidal ideation of 170 children when they were 12 and again at age 13. Disturbed dreaming tends to lessen with age and did so in this sample. At the same time, the rate of suicidal ideation increased, and analysis of the data showed that the adolescents who had suicidal ideation had significantly more disturbing and recurring dreams. In a review of the link between sleep disturbance and suicidal behaviours, nightmares appear to constitute an independent risk factor, especially in young people and when nightmare frequency is high (Lopez-Cast roman & Jaussent, 2020).

Nightmares, Suicide and COVID-19

There was a notable increase in nightmare frequency during the COVID-19 pandemic (Musse et al., 2020; Scarpelli et al., 2021). In general, it has been shown that nightmares increase following exposure to trauma. One recent study in China (Que et al., 2022) found that suicidal ideation was prevalent among hospital workers exposed to COVID-19, and that nightmares fully mediated the relationship between trauma exposure and suicidal ideation. The authors advocated for nightmare intervention as a component of suicide prevention strategies. This study included 16,220 hospital workers, and 13.3% had reported suicidal ideation in the previous month. Exposure to COVID-related traumatic events (CTEs) were found to be significantly associated with insomnia, nightmare frequency and suicidal ideation. When the researchers controlled for confounding variables *only nightmares*, and not insomnia, depression or anxiety were found to be an independent risk factor. This corroborates several other studies that found nightmares to be an independent risk factor for suicidal ideation (e.g., Andrews & Hanna, 2020; Li et al., 2010; Littlewood et al., 2017).

Clinical Research:

Nightmares as Symptoms of Psychiatric Disorders

Nightmares frequently occur as symptoms of various psychiatric disorders, in particular post-traumatic stress disorder (PTSD), depression and anxiety disorders. Understanding the relationship between nightmares and psychiatric disorders can provide insight into the complex interplay between these factors and suicide risk and can inform treatment. A recent review by Sheaves (2022) found that nightmares may contribute to the development of psychiatric illness rather than being merely a symptom. The paper concludes that nightmare treatment may be an avenue for reducing threat-based disorders in particular. Thirty-five studies were assessed overall. Although most were not designed to test the effectiveness of nightmare treatment, the researchers were able to note moderate reductions in PTSD and depression post treatment, plus some reduction in anxiety and paranoia following direct treatment of nightmares.

The study has an interesting focus on *network approaches* to psychopathology -- an interest in symptoms that account for comorbid diagnoses. For example, sleep disruption can lead to a variety of mental illnesses and thus is identified as a clinical priority. The authors suggest nightmares generate anxiety and subsequent hyperarousal that may lead to more nightmares, a feedback loop that warrants greater clinical attention. Nightmares can also exacerbate negative mood due to their distressing content. And via yet another avenue, sleep disruption, nightmares can contribute to a range of mental health issues. While nightmares are typically associated with PTSD, half of patients with psychosis or dissociative disorders and a third of those with mood disorders also experience problematic nightmares. This research adds to the growing base of evidence for the need to treat nightmares. The authors are suggesting here that nightmares may not be an isolated symptom, but a more of a global one, and also a potential causal factor in the exacerbation of many forms of mental illness. While it is difficult to tease apart what is causal and what is symptomatic, it's clear that once nightmares become chronic, they tend to make matters worse in at least three ways: by creating anxiety that generates more nightmares, by disrupting sleep and the myriad repercussions from that, and also by adversely affecting mood, especially if the dreamer dwells on the negative content.

Nightmares and Psychopathology Associated with Suicide

Clinical research has shown that nightmares are often linked to psychopathology associated with suicide, such as hopelessness, emotional dysregulation, and impulsivity. These factors may mediate the relationship between nightmares and suicidal behavior and can be addressed in treatment. Littlewood et al. (2016) found that those experiencing persistent nightmares had higher levels of hopelessness, a feeling that can be evoked and exacerbated by nightmares. Persistent nightmares can undermine a sense of agency and belief in the possibility of change, and this sense of entrapment and hopelessness leads to suicidal thoughts and behaviours.

Rufino and colleagues (2020) examined the association of emotional dysregulation with nightmares and suicide. They sampled 2,683 psychiatric inpatients and found that the interaction between nightmare frequency and problems with emotional regulation predicted past suicide attempts. Andrews and Hanna (2020) conducted a review of the psychological mechanisms underlying the relationship between nightmares, suicide, and self-harm. Their conclusion, after reviewing 12 studies, is that negative cognitive appraisals and emotional dysregulation play key roles in the nightmare/suicide/self-harm relationship (more so than psychosocial factors or depression). In terms of emotion regulation, there can be a dual effect -- nightmares can both result *from* and result *in* emotional dysregulation (Levin & Nielsen, 2009).

Nightmare Content and Suicide Risk

The type of nightmare has recently been shown to be a differentiating factor in assessing suicide risk. Of the 3 nightmare types identified by researchers, only trauma-related nightmares are linked to

greater risk of suicide (Youngren et al., 2024). Idiopathic and complex nightmares (comorbid with sleep and breathing problems) do not lead to higher suicide risk. The study used a sample of 3,543 veterans who had previously attempted suicide. Another recent study (Geoffroy et al., 2022) underscores the importance of asking about dreams – and offers some clarity about specific ways that nightmares escalate prior to a suicide attempt. The naturalistic study collected dream information from 40 patients that were hospitalized for suicidal crisis and found that 80% had experienced changes in their dream lives prior to this crisis. Two-thirds experienced bad dreams, half had nightmares and 22% had dreams about suicide. The researchers also noted a progression in the way dreams changed prior to the suicidal crisis, with bad dreams appearing 4 months' prior, nightmares 3 months' prior and suicidal scenarios 1.5 months' prior. They concluded: "Dream alterations and their progression can be readily assessed and may help to better identify prodromal signs of suicidal behaviors." This is corroborated by a review of nightmare themes, in which Schredl and Goritz (2018) noted that the content of disturbed dreaming can include direct depictions of suicide and that such dreams may trigger suicidal behavior.

Geoffroy studied the differences in those whose dream lives changes prior to their suicidal crisis versus those whose dreams stayed much the same and found that those with altered dreaming had more of a family history of insomnia. Virtually all had symptoms of depression and altered sleep quality prior to their hospitalization. For clinicians treating those at risk for suicide, this research underscores the importance of asking clients about dreams on an ongoing basis, so one can be alert to changes. An increase in bad dreams that escalates to more frequent nightmares, and an increase in suicide-related scenarios are important changes that may predict a suicidal crisis. Although the research into dream content and suicide risk is scarce, it appears that suicidal patients report more death and violent content in their dreams than average (Firth, 1986; Nadorff et al., 2014). Such dreams are relevant to increasing our understanding of the relationship between nightmares and suicidal behaviors. These can reflect underlying distress and potentially contribute to the development or exacerbation of suicidal thoughts. Such dream content can not only be helpful in diagnosing suicide risk, but also can be a target for treatment.

Nightmare-Specific Intervention Strategies and their Impact on Suicidal Ideation

Although the research into nightmare treatment for suicidality is sparse, it does indicate that interventions aimed at reducing nightmare frequency and/or related distress may also decrease suicidal ideation. Most research reviews note the scarcity of data on the impact of nightmare treatment in general and on suicide specifically. However, they do advocate for nightmare treatment and for clinicians to take nightmares into account when treating suicidal patients. Several evidence-based treatments target nightmares and their associated psychological distress. One such intervention is imagery rehearsal therapy (IRT), which involves modifying the content and emotional tone of nightmares through imagery rescripting. IRT has shown promising results in reducing nightmare frequency, improving sleep quality, and alleviating associated distress (Davis et al., 2020; Krakow et al., 2000, 2001). Nightmare-focused interventions can reduce the severity of nightmares and may indirectly contribute to suicide risk reduction.

Rahnama and colleagues (2013) demonstrated the effectiveness of nightmare treatment at reducing suicidal ideation. In the controlled study, half of the 26 participants were treated with Imagery Rescripting and Reprocessing Therapy (IRRT) for an average of six 90-minute sessions. The protocol includes imaginal exposure to nightmare material, imagery rescripting, and then relaxation if the session caused distress, plus homework. In those who received treatment, mean suicidal ideation score was reduced from 13.02 to 3.46, with a large effect size of 0.449. An uncontrolled study (Ellis, Rufino, & Nadorff, 2019) has shown that treatment of nightmares using IRT significantly reduced nightmare frequency and intensity, as well as reducing suicidal ideation. Prazosin, the leading pharmaceutical treatment, was also shown to prevent and reduce suicidal ideation (Raskind et al., 2018). In addition, Cogan and colleagues (2019) treated 75 trauma-exposed participants with frequent nightmares in a brief protocol using exposure, relaxation and rescripting

therapy (ERRT). Although suicidal ideation was lower following treatment, mechanism of action was not clear.

However, not all studies of nightmare treatment showed improvement in suicidal ideation. The systematic review of the effect of nightmare treatment on mental health issues by Sheaves, Rek, and Freeman (2022) noted a surprising result from two pilot studies that nightmare treatment might prevent recovery from suicidal ideation, despite strong evidence linking nightmare frequency with subsequent suicide attempts. Another study (Sheaves et al. 2015) showed suicidal ideation was prolonged after CBT for nightmares, suggesting exposure to nightmare imagery increased suicide risk. Overall, however, the review found treating nightmares to be helpful, particularly with threat-based disorders, pointing to a causal relationship between nightmares and suicide.

Theoretical Frameworks: How Do Nightmares Lead to Suicide?

The mechanisms that link frequent nightmares with increased suicide risk can be both psychological and neurobiological, and much is unknown about this complex dynamic. However, researchers in this area are beginning to understand the circularity of the problem – put simply, that distress leads to nightmares and nightmares cause distress, particularly for those with trauma history and psychiatric illness. The good news is that intervention is possible in several ways that have not been utilized. Nightmare rescripting protocols give those with frequent nightmares a sense of control they never thought possible. Since hopelessness and despair are key factors that drive suicide risk, any way to mitigate these by instilling a sense of agency has the potential to help (Ellis, 2023; Germain, 2004).

Sleep disturbance is another mechanism through which nightmares can impact suicide. The primary finding of a meta-analysis (Pigeon, Pinquart, & Conner, 2012) was that sleep disturbances, including nightmares and insomnia, significantly increase suicidal ideation, attempts at suicide and suicide itself. Pigeon noted that the results are bolstered by the finding that sleep disturbance and suicide are correlated even after adjusting for depression. One clue about how disrupted sleep leads to suicidal thoughts is offered in a recent study (Glenn et al., 2021) that links sleep disruption in an adolescent sample with next-day suicidal thoughts – even after controlling for depression and daily sadness. The intrusion of nightmares, and their intensification of negative emotions can lead to rumination that further disrupts sleep and it is easy to see how this dynamic can become a vicious cycle.

Frequency of nightmares and not distress/severity or chronicity was found to be the key differentiating factor in those who made repeat suicide attempts (Speed, Drapeau, & Nadorff, 2018). In a study of 225 nightmare sufferers with more than one suicide attempt, it was found that those with at least one nightmare per week, were significantly more likely to re-attempt. Other suicide risk factors such as nightmare severity and chronicity, as well as depression, PTSD and insomnia did not predict repeat attempts. The authors suggest reasons for the frequency of nightmares as the key differentiating factor may be the lower distress tolerance of frequent nightmare sufferers, and the hopelessness it may cause to be plagued with inescapable and disturbing feelings and images so often.

Neurobiological mechanisms can also provide a way to understand the relationship between nightmares and suicide, and again the relationship appears to be bidirectional and complex. In this author's review of nightmare causes and treatment, I show how the state of the nervous system drives nightmare frequency and affects content (Ellis, 2023). I explain how the polyvagal theory (Porges, 2011, 2021) might inform a greater understanding of nightmare aetiology and treatment: "Attempts to understand how nightmare treatments work have yielded confusing and sometimes contradictory results. Understanding the role of the autonomic nervous system in nightmare formation and treatment may provide a missing link." The paper also describes the "Nightmare Relief" protocol based on a polyvagal approach to nightmares and their treatment.

Treatment Recommendations and Future Directions

The overarching conclusion from this review of the link between nightmares and suicide is that the two are clearly linked and much more can be done to research, inquire into and treat nightmares as a way of mitigating suicide risk. Although the mechanisms of action regarding cause and treatment are unclear, the evidence suggests existing treatments are moderately effective, and when they don't help, they also do no harm. One area of intervention that warrants further development are the range of experiential approaches to nightmare treatment. Limitations to cognitive approaches to dreams have been clearly identified, and the field of dream therapy has undergone a paradigm shift toward experiential methods (Ellis, 2019, 2023). Nightmare treatment may benefit from a similar paradigm shift.

In my clinical experience treating trauma and nightmares over two decades, I see considerable benefit in treating disturbing dreams. The dream content itself can point to areas of trauma that need to be metabolized and integrated, and when this is achieved, the nightmares tend to change or sometimes cease altogether (Ellis, 2016). Also, when patients are taught simple ways to rescript their nightmares, they can do this on their own, at night after waking from a frightening dream. This gives them an alternative to rumination leading to suicidal thoughts – patients feel empowered when they know they can calm down and change their dream imagery into something constructive, reducing the time it takes to fall back to sleep, and the likelihood that the nightmare will recur. This strategy increases hope and agency, and improves sleep quality; thus, it has the potential to reduce suicide risk.

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A Commentary on Color Red and the Assessment Process: Implications for the Rorschach

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This paper comments on the role of the color Red in the assessment process with specific applications to the Rorschach, as outlined by Piotrowski (2023). Based on prior research findings, the central importance of the impact of color Red on cognitive and perceptual processes is noted. Future research should stress experimental findings as well as applications for clinical assessment.

The recent article by Piotrowski (2023) discusses the effects of the color Red on perceptual and cognitive aspects and the role of color in the Rorschach assessment process. In an earlier study, Piotrowski (2012) pointed out that psychological findings indicate that the color Red elicits predominantly negative reactions in humans, i.e., avoidance motivation, threat, and danger. The author notes that "since color is a central aspect of the evaluation process in Rorschach tests, it seems worthwhile to study the role of different hues in this process" (Piotrowski, 2017, 2018). The 2023 article focuses on color Red and reviews previous research to examine the importance of red and its role in the perceptual and cognitive processes involved in Rorschach assessment.

Piotrowski claims that color red has a variety of effects on psychological responses via emotion-based associations, but that the effects of red on mental functioning vary depending on the psychological context. The paper then reviews previous research, summarizes the characteristics and psychological features of the perceptual and attentional processes induced by red color, and makes recommendations for research and clinical practice. One of the effects of the red color on perceptual and cognitive processes is that red affects selective attention in visual search (Shih &Sperling,1996) and induces high arousal potential and that the color Red elicits high arousal potential (Aaronson, 1964; Crane & Hicks,1989; Jacobs & Hustmyer, 1974; Wilson, 1966). On the other hand, there are contrary findings that red inhibits cognitive performance (Martin,2017). While the above two findings stress the detrimental effects of red on perception and cognition, a third finding is that red is unrelated to anxiety and other factors and mitigates the detrimental effects of color on cognitive processes (Smajic, 2014).

After reviewing the findings of previous studies, Piotrowski (2023) points out that the findings regarding the effects of color red on perceptual and cognitive functions, especially the potentially detrimental effects, should be used in the clinical interpretation of the projective method. Based on these findings, he also makes the point that when color shocks are exerted in II and III cards containing red stimuli, the effects of these two cards and subsequent illustrations on the number of responses, perception, and protocol should also be examined. In addition, the article states the need for further studies on perception and cognition regarding the color red, taking into account various age groups, color sensitivity, and psychopathology.

The color response in Rorschach is one that provides important information on psychological characteristics, especially regarding emotion. However, as pointed out in this paper, there are few explanations of psychological traits from color in the context of assessment, and validation of the validity of such explanations has been constantly criticized. Although there have been several validations of color responses using meta-analysis, such as Mihura et al. (2013), it will be necessary to test hypotheses from

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various perspectives in the future. In this context, this paper is significant because it presents a wide variety of findings on the effects of color red, one of the most important colors in Rorschach, on cognitive processes, and makes recommendations for future research and clinical applications.

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Commentary:
Could We have a New Look on Projective Methods?

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About 20 years ago, Meyer and Kurtz (2006) and Bornstein (2007) argued that the labels of 'objective' and 'projective' for psychological tests have low construct validity and clinical utility. Whereas it seems that the label 'objective' carries with it a positive connotation of unbiased and evidence-based prediction, 'projection' has generally the worse reputation of a subjectively biased and theoretically laden prediction. As claimed in those two seminal papers, criteria for identifying a personality assessment method rely on two factors: the kind of stimulus used in the test and the kind of the underlying process that the task requires. Classical test classification implies that objective methods use stimuli that are not equivocal, typically an adjective, sentence, or question. The respondent is required to indicate the extent to which measure accurately describes themselves by using a limited set of established response options (e.g., true/false, yes/no, never / sometimes/often/always, or other Likert-type scales). The process underlying the objective methods is thought to rely on the small, if any, burden of subjective inferences from the assessor on the scoring interpretation (see Piotrowski & Keller, 1984). Nowadays we do know this is not true since the subjective interpretation of the examinee may affect deliberately or involuntarily the results of the test. In contrast, the classical test classification defines as 'projective' those methods that use ambiguous or not defined stimuli. The person is required to deliver a free response with minimal or no external guidance or anchorage. Thanks to the poorly defined perceived object, the examinee makes a subjective sense of the reality of the stimulus by wrapping it with *something* that lives only in their inner world but not in the stimulus. Once again, nowadays we do know this is not true because any stimulus, ambiguous as it can be, is a double-faced coin: one side is what is there in the stimulus (implying perception) and the reverse side is what is there in the subject (implying projection). Hence, the suggested change as 'performance-based' (Meyer & Kurtz, 2006) when the measure focuses on the performance for completing the task (e.g., completing the block design test or accomplishing the cognitive-perceptual problem-solving task by delivering a Rorschach response) and 'stimulus-attribution' (Bornstein, 2007) when the person is required to attribute a meaning to a stimulus based in part on its formal characteristics and in part on the person's cognitive style, motives, emotions, and need states. Briefly, as outstanding classic authors stated, a personality assessment measure involves a "dialectic tension" (Schafer, 1954, p.109), an "apperceptive distortion" (Abt & Bellak, 1950, p.12), a balance between the inner world and the external reality that parallels the "transference reactions among psychotherapy patients to the extent to which their therapists present themselves as ambiguous figures rather than real objects" (Weiner, 2003, p.10).

Projective methods are given low scientific credibility on the psychological stock exchange largely by those who conclude that objective methods are truly what their label states, particularly those for whom personality assessment is a matter of aggregated numerical data. Fortunately, at least in my view, there are psychologists for whom personality assessment is also a matter of clinical reasoning. Clinical psychologists are very familiar with what projection is and therefore know it is not a *thing* that is present (low market price) or absent (high market price) but a psychological phenomenon that, as all psychological phenomena, exists dimensionally, namely it can be viewed as a mental *function* based on reference axes that define its frequency, intensity, and duration, just as velocity is a function of space and time. In my view, the question is not whether a subject does or does not use projection when processing test stimuli but *how much* they activate the projective mode in processing test stimuli. Let me offer as an example the phenomenon of

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dissociation. In psychopathology, it is considered a mechanism serving the manifestation of symptom-based syndromes (amnesia, depersonalization, derealization) and is defined in the DSM-5-TR as the loss of high-order integrative abilities, specifically the "disruption of and/or discontinuity in the normal integration of consciousness, memory, identity, emotion, perception, body representation, motor control, and behavior" (American Psychiatric Association, 2022, p.330). In other words, *when present as a category*, it defines a specific group of diagnoses that, as a consequence, are different from other disorders that do not use this category, by relying on the same logical basis that differentiates 'objective' from 'projective' tests. However, as a *dimensional functioning*, dissociation indicates psychological processes and overwhelming emotions hindering the normal integration of different high-level mental functions such as consciousness, continuity of self-identity, emotive perception and control, behavioral control, body representation, and mentalization (Farina & Imperatori, 2023). Depending on the context of the subject, it may indicate a healthy activity of mind wandering and default model brain network activity, functional re-organization of the mind into enduring parallel-distinct structures in victims of violent events and car accidents, or a pathogenic process of disintegration of the self in severe trauma and abuse (Farina & Meares, 2023). Like projection, dissociation is not an all-or-none phenomenon but a dimension whose effects in intensity, severity, and duration are related to the context. Hence, we can regard projection as a function of a number of external reference axes such as personality, external events, personal disposition, social environment, etc.

At least two further factors can be viewed as reference axes: affordances and predictive coding. The construct of affordances emerged from the field of ecological psychology. Affordances refer to the properties of objects that indicate how they can and should be used, acted upon, or interacted with in a given situation (Gibson, 1977). Humans do not actually perceive mind-independent properties of the world (steepness, height, weight, distance) but *opportunities for action* (i.e., affordances) that differ depending on the current state of the body and available resources/demands in the current context. For example, hills are perceived as steeper when subjects are requested to imagine the 'walkability' based on whether they are alone or accompanied by a good friend. The brain simulates climbing the hill by comparing available physical resources to those actually required by the task and predicts the need for fewer resources in the context of social support (Gibson, 2014). Affordances are the building blocks of situation *and* mental state representations. The brain's representations of situations and mental states are composed of weighted sums of representations of the actions they afford (Thornton & Tamir, 2024) so that, in terms of Bayesian processes of active inference, individuals can predict what happens next (Kirmayer, 2024). If we consider the brain as an active inference device, projection can be placed everywhere in psychological processing since perception is a matter of continuous active inference, not based on the separation of past (memory, recall) from future (expectation, prevision) and on separation of inside (my past representations) from outside (mind-independent objects and events). Perception is an integration of past and future, inside and outside. Specifically, in the predictive coding model (Barrett & Simmons, 2015; Parr et al., 2022), external inputs are thought to constrain estimates of *prior* probability from past experience and to create the *posterior* probabilities that serve as beliefs about the causes of such inputs in the present. In one word, the posterior probability (the way I perceive the hill steepness) is a conditional probability because it is a function of the new piece of information (alone or accompanied). When driving on a familiar road in thick fog, the reliability of the sensory data is expected to be low, so the weighting of the units processing prediction errors from the sensory data will be low and the driving will largely be determined by top-down expectations of the shape of the road in question. In contrast, when driving on an unfamiliar mountain road in clear weather, sensory data will largely determine the driving, and prediction errors will be predicted to be of high precision and will be given a high weighting. Predictions (with prior probabilities) function as hypotheses about the world that can be tested against sensory signals that arrive in the brain. The goal is to minimize the difference between the brain's prediction and incoming sensation (prediction error) related to the contextual affordances. In an interesting experiment, for example, patients with refractory neuropathic pain were implanted with intracranial electrodes in the anterior cingulated cortex (ACC) and the orbitofrontal cortex (OFC) and were requested to report their daily feelings of pain on a momentary

ecologic assessment device. OFC was more active when subjects reported usual feelings of chronic pain since OFC circuits integrate pain expectation and context-dependent predictions that influence subjective pain evaluation, which may include rumination and poor potential use of objects (affordances). In contrast, ACC was more active when subjects reported acute pain in their everyday life or when administered as experimental stimuli in the laboratory that reflects a transient, externally evoked pain experience because ACC is a key node in perceiving acute pain stimuli (Shirvalkar et al., 2023). Closer to our field, Meyer and Friston (2022) suggested that this model may explain the response process to the Rorschach, particularly those responses (or *posteriors*) that are based more on *priors* (e.g., human movement and poor form quality) than on observation of formal features (e.g., pure form, matter-of-fact responses without embellishments).

If we look at projection from this perspective, the distinction from the 'objective' methods makes no sense. Projection can be seen as a mental function that is conditioned by the context of the person and can be adaptive or not based on external or internal factors, as it is claimed for other psychological processes such as dissociation. If we do not perceive objects as they are but as affordances, or opportunities for action, we prefer to rely on new information if we are unsure about how much we can trust our beliefs. On the other hand, if *priors* are afforded overly much precision, inputs that are consistent with prior predictions are prioritized and discrepant information can be largely neglected. Much more research is therefore needed to disentangle the weight of *priors* and the weight of *observations* in processing test stimuli (or *posteriors*), regardless of whether stimuli are words, images, or inkblots.

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Projective Indicators of Substance Use Disorders on Somatic Inkblot Test

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Substance use disorder (SUD) is characterized by long-term exposure to substances leading to mental and physical dependence, often resulting in social, academic, and occupational impairment. Understanding the projective indicators of substance use disorders is important for targeted interventions and treatment. Thus, the aim of this study is to examine the projective indicators of substance use disorders on the SIT. The data was collected from patients with clinical diagnosis of SUDs belonging to the age group of 18-35 years old from De-Addiction Centres Delhi/NCR region. A descriptive analysis was performed, and it was found that the patients with SUDs had low human, sex, movement, most typical and typical responses as compared to normal controls. In addition, they displayed high animal, anatomical, other responses, total number of responses and rejection of cards, pathological anatomical and hostility aggression scale as compared to the normal group. The results suggested that interventions targeting emotional regulation and adjustment may be valuable in the treatment of SUDs.

Introduction:

Substance abuse is an enduring medical and societal concern (Gardner, 2011). All organisms instinctively seek positive stimuli and avoid negative ones for survival, regulated by the nervous system. Neurobiology employs evolutionary processes like homeostasis and learning to adapt to stimuli (Daniel & Pollmann, 2014). Across species, similar responses to positive and negative stimuli indicate their importance for survival, reflected in shared neurobiological mechanisms (Scaplen & Kaun, 2016). Human ingenuity has enabled the extraction and refinement of highly reinforcing stimuli that surpass naturally occurring reinforcers. Notably, humans have developed the ability to purify and deliver drugs, such as alcoholic beverages, cigarettes, drug injection equipment, and vaping devices. Advances in chemistry have also introduced potent psychoactive substances like synthetic opioids, cannabinoids, and stimulants. Access to these highly reinforcing drugs, combined with promotive environments and individual vulnerabilities, including mental illness, chronic pain, genetics, gender, and youth, contribute to drug experimentation and the risk of substance use disorders (SUD) (Volkow et al., 2019).

According to the Diagnostic and Statistical Manual of Mental Disorders 5 (DSM-5), substance use disorder (SUD) is characterized by compulsive drug seeking, impaired control of substance use, impaired social interactions, risky drug use, and pharmacological changes (American Psychiatric Association, 2013). The American Society of Addiction Medicine (2011) describes addiction as a treatable, chronic medical disease resulting from complex interactions among brain circuits, genetics, environment, and life experiences, leading to compulsive substance use or behaviour despite harmful consequences.

Globally, in 2021, approximately 270 million people (5.5% of the population aged 15-64) had used psychoactive drugs, with around 35 million affected by drug use disorders (World Health Organization, 2021). In India, alcohol, cannabis, and opiates are widely used substances, and drug misuse is prevalent in society. The most commonly used substances are alcohol, cannabis, opium, and heroin, with buprenorphine, propoxyphene, and heroin being the most commonly injected drugs. It is estimated that in India, 62.5 million people use alcohol, 8.75 million use cannabis, two million use opiates, and 0.6 million use sedatives or hypnotics (Kumar, 2004).

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The research studies have provided valuable insights into the personality characteristics associated with substance use disorders (SUDs). Gonçalves et al. (2022) examined the maladaptive personality traits of individuals with Depressive Disorders (DD) and SUDs using the Personality Inventory for DSM-5 (PID-5). They found that irresponsibility, deceitfulness, and callousness were prominent traits in individuals with SUDs. Similarly, Fodstad et al. (2022) compared personality traits in a sample of Norwegian individuals with SUDs to the norm sample, revealing higher neuroticism and lower conscientiousness, agreeableness, extraversion, and openness among those with SUDs. Hashemi et al. (2019) also observed differences in personality traits between drug users and non-users, with drug users exhibiting higher novelty seeking and harm avoidance but lower reward dependence and self-directedness. Zilberman et al. (2018) explored personality profiles across various addiction types, highlighting elevated levels of impulsivity and neuroticism in addicted individuals. Finally, Habersaat et al. (2018) found sex differences in the relationship between personality disorder traits and SUDs among adolescents, with antisocial and borderline traits positively associated with SUDs.

Thus, the aim of the study was to explore the Projective Indicators of Substance Use Disorders on Somatic Inkblot Test.

Method:

Sample:

The data was collected from patients with clinical diagnosis of substance use disorder. Thus, a total of 30 (15 patients with substance use disorder and 15 normal controls) participants falling between the age group of 18-35 years old from De-addiction Centres, Delhi/NCR region. Further, patients with family history of psychiatric illness, families involving stepparents/adopted parents and patients with neurodegenerative / neurodevelopmental disorders were excluded from the study. Purposive sampling was used in this study.

Procedure:

The consent was taken from the participants and a data sheet containing Information about socio demographic data was collected. Alcohol, Smoking and Substance involvement Screening test (ASSIST)was used to determine the severity of the substance used among patients with substance use disorder followed by the administration of Somatic Inkblot Test to assess the personality of the participants.

Measures:

The tools used in the research study are –

Alcohol, Smoking and Substance Involvement Screening test (ASSIST)

The Alcohol, Smoking, and Substance Involvement Screening Test (ASSIST) was created by a global team of addiction researchers and clinicians affiliated with the World Health Organization (WHO) in response to the significant global public health challenges associated with psychoactive substance use. The ASSIST (version 3.1) is an 8-item questionnaire designed to be administered by a healthcare professional with an aim to screen for the use of different substances such as tobacco, alcohol, cannabis, cocaine, amphetamine-type stimulants (ATS), sedatives and sleeping pills (benzodiazepines), hallucinogens, inhalants, opioids, and other drugs. (World Health Organization, 2010). The test demonstrates good to excellent test-retest reliability, with reliability coefficients (kappas) ranging from 0.90 for consistency of reporting substance use to 0.58 for regretted actions under the influence. Reliability coefficients for different substance classes range from 0.61 for sedatives to 0.78 for opioids (WHO ASSIST Working Group, 2002). It also exhibits strong concurrent, construct, and discriminative validity (Humeniuk et al., 2008).

Somatic Inkblot Test

The Somatic Inkblot Test (SIT) is a semi-structured, projective, diagnostic test and an adjunct to psychotherapy. The SIT is available at *www.dubayhealingcenter.com*, with 30 images was released for quick assessment, after 30 years of intense data collection on clinical, organizational, and normal groups. Researchers have reported high reliability and validity and papers published in the international journal, "SIS Journal of Projective Psychology and Mental Health" (www.somaticinkblots.com) clearly show the advantages of the SIT both in the "individual" as well as "group administration" settings. The test provides insights into the patient's imaginative capacity, functioning intelligence, self-projection, interpersonal relationships, and psychological well-being. The SIT is backed by three theories known as Somatic Imagery Theory, Theory of Body Symbolism and Theory of Inner Cry. These have fulfilled the theoretical gap of the Rorschach test (Cassell & Dubey, 2003; Dubey et al., 2019).

Data Analysis

Inkblot protocols were analysed using the standard procedure (Dubey et al,2019)The data was further analysed using IBM SPSS for Mac, Version 20.0.

Results:

Preliminary Analysis

Preliminary analysis of the data was conducted, which includes descriptive statistics. The key variables used are various parameters on Somatic Inkblot Test (SIT) such as Human, Animal, Anatomical, Sex, Other responses, Most Typical Responses, Typical Responses, Movement, Pathological scales and Total number of responses. The data indicates that the 40% of the subjects lies in the age range of 31-35 years and 27% lies in the age range of 8-24 years among patients with substance use disorders, whereas 47% of the subjects lies in the age range of 25-30 and 20% lies in the age range of 31-35 among normal controls. Thus, it suggests that the mean age of patients with substance use disorder and normal controls was 27.93% and 26.47% respectively, which is crucial age to contribute to the economic development of the society.60 % of the subjects were unemployed and 40% were employed among patients with substance use disorders, whereas all in normal group were employed.33% of the subjects had only single parents among patients with substance use disorder, whereas 60% of the subjects had nuclear family structure among normal controls. 54% of the subjects had a diagnosis of poly substance which indicates that they consumed more than one drug such as alcohol, tobacco, cannabis, and opioids, 20% were alcohol dependent and 13% were cannabis and opioids dependent each.

Table 1. Mean and S.D. of Adjustment, Emotional Regulation, and Indices on Somatic Inkblot Test

	Substance Use Disorder		Normal Controls	
	Mean	**S.D.**	**Mean**	**S.D.**
Human	3.27	0.88	11.60	1.40
Animal	8.47	2.41	3.47	1.13
Anatomical	6.80	1.52	4.93	1.83
Sex	0.40	0.63	1.93	1.03
Other Response	11.13	2.07	2.07	0.80
Most Typical	7.93	0.80	9.73	0.46
Typical	5.53	0.91	7.07	0.96
Movement	3.80	1.15	7.80	0.94
Total Responses	49.49	2.77	48.93	3.41

Table 2. Comparison of two groups on Somatic Inkblot Test – Content Category

	Substance Use Disorders		Normal Controls	
	Frequency	**Percentage (%)**	**Frequency**	**Percentage (%)**
Human	49	6.60	174	23.71
Animal	127	17.12	52	7.08
Anatomical	102	13.75	74	10.08
Sex	6	0.80	29	3.95
Other response	167	22.51	31	4.22
Movement	57	7.68	117	15.94
Most Typical Response	119	16.04	146	19.89
Typical	83	11.19	106	14.44
Pathological Anatomy Scale (PAS)	10	1.35	0	0
Depression Scale (D)	3	0.40	3	0.41
Hostility Aggression Scale (HAS)	18	2.43	2	0.27
Paranoia Scale (P)	1	0.13	0	0
Total Number	742		734	
Rejection of responses	9		2	

Table 3. Comparing the Somatic Inkblot Indices among two groups on Mann-Whitney U test

Variables	**Groups**	**N**	**Mean Rank**	**U**	**Z**	***P***
Human	SUD	15	8.00	225.00	4.711	.000*
	Normal	15	23.00			
Animal	SUD	15	22.40	9.00	- 4.339	.000*
	Normal	15	8.60			
Anatomical	SUD	15	21.93	16.00	- 4.081	.000*
	Normal	15	9.07			
Sex	SUD	15	9.93	196.00	3.627	.000*
	Normal	15	21.07			
Other Response	SUD	15	23.00	0.00	- 4.717	.000*
	Normal	15	8.00			
Most Typical	SUD	15	8.00	225.00	4.833	.000*
	Normal	15	23.00			
Typical	SUD	15	8.00	225.00	4.757	.000*
	Normal	15	23.00			
Movement	SUD	15	8.03	224.50	4.691	.000*
	Normal	15	22.97			
Pathological Anatomy Scale (PAS)	SUD	15	15.50	112.50	.000	1.000
	Normal	15	15.50			
Depression Scale	SUD	15	15.10	118.50	.384	.806
	Normal	15	15.90			
Hostility Aggression Scale (HAS)	SUD	15	22.80	3.00	- 4.848	.000*
	Normal	15	8.20			
Paranoia Scale (P)	SUD	15	16.00	105.00	-1.000	.775
	Normal	15	15.00			

(p<.50*)

A descriptive analysis was carried out, tabulated, and depicted in Table 2 for Content category. It demonstrated that patients with substance use disorder had low human (7.04%), sex (0.80%) and movement (7.685) among patients with substance use disorders as compared to normal controls. In addition, they displayed high animal (17.12%), anatomical (13.75%) and other (22.51%) responses as compared to the normal group. Further, patients with substance use disorder displayed low most typical (16.04%) and typical (11.19%) responses as compared to the normal group. In addition, patients with substance use disorders scored high on Pathological Anatomical Scale (1.35%) and Hostility Aggression scale (2.43%) as compared to the normal controls. Lastly, there were high number of total responses and rejection of card among patients with substance use disorder as compared to the normal controls.

Discussion:

The study explored the underlying mechanism of the various parameters of Somatic Inkblot Test. A descriptive analysis was carried out, tabulated and depicted in Table 2 for Content category. It demonstrated that patients with substance use disorder had low human responses (7.04%) which were indicative of lack of interest in other and poor interpersonal skills. There were low sex responses (0.80%) on images with imbedded sexual structure among patients with substance use disorder which may indicate deep rooted sexual conflict and a strong indicator of impotency (Dubey & Dubey, 2021). In a meta-analysis which included five case–control studies with a total of 3,395 men demonstrated a higher prevalence of erectile dysfunction in cannabis users (more than two-thirds) and leading to four times increased odds ratio of erectile dysfunction in cannabis users compared to controls (Pizzol et al., 2019). In another study, it was found that illicit drug male abusers were prone to have ED, decreased sexual desire, and increased ejaculation latency. Erectile dysfunction and decreased sexual desire were most commonly seen in heroin, followed by amphetamine and MDMA mono-users, while increased ejaculation latency occurred commonly in all of the abusers (Bang-Ping, 2009). Vallejo Medina & Sierra (2013) reported that the erection scale scores obtained by people with a history of substance abuse were lower than those of non-users. Therefore, the results obtained are consistent with the studies on the role of impotence among drug users.

Patients with substance use disorders also displayed low movement responses (7.68%) as compared to normal control, indicating a tendency towards withdrawal and aloofness, as well as poor adjustment and interpersonal relationships. Loneliness was found to be stronger in drug abusers, potentially leading to a sense of being different from the community and an increased likelihood of engaging in risky behaviours (Dubey & Dubey, 2021).In a study conducted by Hosseinbor et al. (2014) it was revealed that there were statistically significant difference between the scores of all four emotional, social, familial, and romantic dimensions of loneliness in substance dependent individuals. Thus, it could be inferred that the feeling of loneliness is stronger in drug abusers rather than non-drug abusers that could develop the sense of being different from community and increase the probability of taking high risk behaviours and abusing drugs. Longitudinal analyses indicated that high levels of drug use early in the year were related to subsequent increases in behavioural and emotional maladjustment (Luthar & Cushing, 1997).

Moreover, patients with substance use disorders exhibited high animal responses (17.12%) as compared to normal group, suggesting a stereotypical approach to the world, immature thinking, and an aggressive attitude. Substance abuse can lead to an increase in domestic violence, sexual assault, suicide attempts, and other aggressive behaviours(Martens & Generes, 2022). The results have been consistent with various studies which indicates that aggression and delinquency were positively correlated with each other whereas delinquency was positively correlated with drug use. Aggression also had a positive relation with drug use. The results further explained that drug use act as a moderator among aggression and delinquency for male adults (Shabbir, Javaid, et al., 2020). Another form of aggression known as cyber aggression appears in many ways to be an insidious extension of traditional human aggressive behaviour intended to cause and may result in harm to the target, who is often a known peer or relationship partner. Research has

suggested that substance use, specifically alcohol use, is associated with an increased risk of perpetrating cyber aggression and it is more likely to occur among older than younger participants and within the context of an intimate partnership rather than a peer relationship. Aside from alcohol, cyber aggression shared a small-to-negligible correlation with other substances, all evidencing a comparable magnitude (Crane et al., 2021).

Furthermore, patients with substance use disorders showed high anatomical and other responses (13.75%) as compared to normal controls, indicating somatic preoccupation, bodily symptoms, tension, anxiety, and psychological disturbances. In contrast, the normal control group displayed high human responses, indicating smooth interpersonal relationships, high self-esteem, and good interpersonal skills, as well as high movement responses associated with fantasy, creativity, intelligence, and active involvement (Dubey & Dubey, 2021).

The findings from table 2also suggested that patients with substance use disorders had fewer typical and most typical responses compared to the normal controls, indicating difficulties in adjustment and interpersonal relations. These individuals are often misunderstood and struggle to fit into teams, showing a withdrawn attitude and ignorance of societal demands. Patients with substance use disorder also exhibited minor abnormalities in the Pathological Anatomical Scale and Hostility Aggression scale but did not meet the criteria for hypochondria or excessive concern about physical health. Their responses displayed minor aggression, making it challenging to control their aggressive behavior, particularly in emotionally provoking situations. Furthermore, in the Pathological scales category, both patients with substance use disorders and normal controls had low scores on the Paranoia and Depression scales (Dubey & Dubey, 2021).

Conclusion:

The findings of this study contribute to our understanding of the projective indicators of adjustment and emotional regulation among patients with SUDs. The results suggest that interventions targeting emotional regulation and adjustment may be valuable in the treatment of SUDs. Future research should further explore these projective indicators and their implications for intervention and treatment strategies. By addressing these psychological factors, clinicians and researchers can enhance the effectiveness of interventions and improve outcomes for individuals with SUDs.

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Psychological Resources and Stress Tolerance Capacity on Rorschach in Patients with Schizophrenia and Bipolar Affective Disorder

Kriti Jain, Deapti Mishra & Ranjeet Kumar

It is evident that psychological recourses and stress tolerance capacity are found poor in various psychiatric conditions that have significant impact on their treatment outcome but are less studied. This study caters to the need to assess and compare the presence of psychological resources, stress tolerance abilities, and capacity to control, as well as coping ability in patients with BPAD and schizophrenia. A sample of 30 patients with Schizophrenia and 30 patients with BPAD, diagnosed clinically by a consultant psychiatrist based on ICD-10 were selected for the study from Gwalior Mansik Arogyashala. (Gwalior Mental Hospital) Patients of both genders, ranging from 18-50 years, having more than 16 responses on Rorschach were included in the study. The findings of the study reveal that patients with BPAD have significant differences in various Rorschach variables such as psychological resources, though poor in both groups, but were extremely limited in patients with schizophrenia compared to the patients with BPAD. Minimal stress tolerance was seen in patients with schizophrenia in comparison to BPAD. Situational stress is seen more in BPAD, with poor capacity of control in both groups.

Introduction:

Clinical psychologists try to understand the personality of their clients to provide them with suitable and effective treatment. Personality is defined as a link between intellect and individual characteristics; the degree to which these affect one another in a person may be seen in their actions and reactions (Sarason, 1945; Vane & Guarnaccia, 1989). There is a diversity of approaches to personality assessment. The behavior and responses of individuals may be assessed and compared to groups of people of comparable ethnicity, socioeconomic position, educational attainment, and gender. Personality tests determine how similar or unlike a person is to the general population and provide measures of such characteristics as feelings and emotional states, preoccupations, motivations, attitudes, and approaches to interpersonal relations. The Rorschach and the TAT are the projective procedures, out of the 10 tests most often employed by clinical psychologists (Watkins et al. 995).

Rorschach is an important tool to assess structure of personality. Its interpretation is based on the process by which persons organize their responses to the Rorschach, which is representative of how they confront other ambiguous situations requiring organization and judgment. In Exner's Comprehensive System, to assess available resources and their use, four crucial variables are grouped together under the rubric "Four Square." It consists of Experience Balance (EB), which reflects the sum of the human movement (M) determinants as compared to the weighted sum of the chromatic color (C) determinants; EA stands for Experienced Actual, which is a simple sum of the two parts in the EB. On one side of the ratio, experience base (eb) represents the total of FM plus n, and on the other side, the sum of all shading and C' answers; the total of the two parts of the eb is called experience potential (ep). EB and EA are seen to represent purposeful, more controlled, and organized psychological activities employing available resources, whereas eb and ep measurements are thought to represent uncontrollable needs and emotions that operate on the individual. Exner emphasizes that a higher EA does not always imply more efficient behavior, but that an individual with a persistently greater ep is unlikely to demonstrate successful behavior over an extended period of time. The Controls and Situational Stress variables assess the coping style and mental ability, such as cognitive and emotional resources to cope with stress (e.g., planning, imagination), as well as the type of internal and external stresses that one needs to cope with (e.g., distracting, disruptive, or distressing internal experiences).

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Usually, schizophrenia is marked by basic and distinctive cognitive and perceptual abnormalities, as well as inappropriate or blunted affect. Although certain cognitive deficiencies may develop with time, clear consciousness and intellectual capacity are typically retained. On the other hand, Bipolar Affective Disorder is a mood disorder characterized by two or more episodes in which the patient's mood and activity levels are significantly disturbed. This disturbance consists of some occasions of an elevation of mood and increased energy and activity (hypomania or mania) and on others of a lowering of mood and decreased energy and activity (depression). Repeated episodes of hypomania or mania are also classified as bipolar disorder. It is evident that psychological recourses and stress tolerance capacity are found poor in various psychiatric conditions, which has significant impact on their treatment outcome.

The purpose of this study is to understand the psychological resources and stress tolerance capacity present in patients with schizophrenia and BPAD. There is a dearth of research regarding the use of the RIBT particularly in the Indian subcontinent, though various indices and variables have been proven effective in eliciting psychopathology and making diagnoses (Jorgensen, Anderson, and Dam, 2000; Perry et al., 2003, Dao and Prevatt, 2006), there are still many that need to be replicated, especially in India. Meyer and Archer (2001) identified the CDI as one of several Rorschach indices that remain under-researched. There is a need to study the psychological resources that are present in patients with BPAD and schizophrenia so that those resources can be used along with their stress tolerance capacity to help manage their symptomology and prevent relapses. Lastly, there is a need to compare the presence of psychological resources, stress tolerance abilities, and capacity to control, as well as coping abilities, between the patients with BPAD and schizophrenia, so that it will clarify and differentiating both disorders in a better way. This study will further help in the therapeutic intervention and psychological management of both conditions.

Methodology:

Aim

The aim of this study was to assess and compare the psychological resources and stress tolerance on Rorschach Inkblot Test in patients with Schizophrenia and bipolar affective disorder. This is a cross-sectional descriptive study. The sample included patients of both sexes, in the age range of 18-50 years, having more than 16 responses on Rorschach Inkblot Test.

Materials

Brief Psychiatric Rating Scale (Overall et al., 1967): The BPRS assesses the level of 18 symptom constructs such as hostility, suspiciousness, hallucination, and grandiosity in patients having or suspected of having schizophrenia or other psychotic disorders.

Young Mania Rating Scale (Young et al., 1978): This scale is intended for use by clinically experienced raters to assess severity of Mania. The YMRS is an 11-item interviewer rated scale. The items have five defined grades of severity.

Hamilton Rating Scale for Depression (Hamilton, 1967): The HRSD is used to quantify the severity of symptoms of depression.

The Rorschach Inkblot Test (Rorschach, 1921): Rorschach Comprehensive System (CS) (Exner,1974) was used in this study.

Procedure

The study was conducted at the inpatient and outpatient department of Gwalior Mansik Arogyashala, Gwalior (M.P.) The sample consisted of 60 patients (30 each of Schizophrenia and BPAD), diagnosed by a consultant psychiatrist following the ICD-10 diagnostic criteria. After taking the consent of the subjects, the primary information regarding demographic variables of all the subjects was collected on a semi-structured clinical data sheet. The severity of the patients with BPAD current episode mania was rated by using YMRS,

for current episode depression HDRS was used, and patients with schizophrenia were rated on BPRS. The *Rorschach Inkblot Test* was administered to patients individually following Exner's (1974) method of administration, scoring and interpretation.

The Experience Actual (EA) variable provides a combined ideational / affective index of adaptive capacities. Low EA (below 6.5) identifies normatively insufficient coping resources. The adequacy of coping capacities in relation to the level of demand people are experiencing was measured by indices of the D score (D) and the Adjusted D score (Adj D). The D score provides an indication of current control and stress tolerance capabilities. The D score at minus level indicates that a person currently is in an overload state and, as a result, may be more prone to some form of impulsiveness than ordinarily is the case. The Adj D score, on the other hand, affords an index of the typical or customary capacity for control. It helps to distinguish between relatively persistent and relatively situational experienced stress. The Adj D at minus level indicates relatively chronic and longstanding difficulties in one's capacity for control. D < Adj D, the Rorschach index of situational stress, indicates that some circumstance exists that has reduced the person's capacity for control and has caused stress tolerance to be lower than usual.

Statistical Analysis

The statistical analysis was done with the help of IBM SPSS- Statistical Package for Social Sciences for Windows, Version 25, released in 2017 (Armonk, NY: IBM Corp.) For the analysis of continuous variables t-test was applied, and for categorical variables Chi square test was applied. For clinical details and symptom assessment of the patients with schizophrenia, mean and standard deviation (SD) were applied.

Results:

The quantitative data was gathered on all the variables and the results were analyzed. Results are summarized in the following tables:

Table 1. Comparison of Four Square of Rorschach Test of Patients with BPAD and Schizophrenia

Variables	Groups		t	p
	Bipolar Disorder M (SD)	Schizophrenia M (SD)		
Four Square				
EB left	2.74 (3.97)	6.45 (1.91)	4.61***	.000
EB right	4.42 (2.04)	1.54 (1.75)	5.86***	.000
eb left	2.46 (1.89)	1.59 (1.75)	1.85	.069
eb right	2.74 (1.79)	1.71 (1.85)	2.19**	.032
EA	5.12 (2.76)	3.84 (2.47)	1.89*	.063
es	4.42 (2.74)	3.30 (1.81)	1.87	.066

Note: N=30 in each group, M= mean, SD= standard deviation *p<.05, **p<.01, ***p<.001

Table 2. Comparison of Psychological Resources (Experience Actual) Scores of Rorschach Inkblot Test of Patients with BPAD and Schizophrenia

Variable	Groups		χ^2	p
	Bipolar Disorder n (%)	Schizophrenia n (%)		
sychological Resources				
EA < 7	18 (60)	22 (73.33)	1.2	273
EA between 7-11	12 (40)	8 (26.67)		
EA > 11	0	0		

Note: N=30 in each group, n= frequency, %= percentage, χ^2= Chi- square

Table 3. Comparison of Capacity for Control (Adjusted D) Scores of Rorschach Test of Patients with BPAD and Schizophrenia

Variable	Groups		χ^2	p
	Bipolar Disorder n (%)	Schizophrenia n (%)		
Capacity for Control (Adj D)				
Adj D ≤ -1	23 (76.67)	23 (76.67)	0.42	.808
Adj D = 0	5 (16.67)	6 (20)		
Adj D ≥ +1	2 (6.66)	1 (3.33)		

Note: N=30 in each group, n= frequency, %= percentage, χ^2= Chi- square

Table 4. Comparison of Stress Tolerance (D) Scores of Rorschach Test of Patients with BPAD and Schizophrenia

Variable	Groups		χ^2	p
	Bipolar Disorder n (%)	Schizophrenia n (%)		
Stress Tolerance (D)				
D ≤ -1	19 (6.33)	22 (73.33)	0.70	.702
D = 0	8 (26.67)	6 (20)		
D ≥ +1	3 (10)	2 (6.67)		

Note: N=30 in each group, n= frequency, %= percentage, χ^2= Chi- square

Discussion:

The present study aimed to assess and compare the psychological resources and stress tolerance on the Rorschach (Inkblot) Test in patients with schizophrenia and Bipolar Affective Disorder.

Demography and Epidemiology

When the groups were compared regarding personal details, no significant difference was found between the two groups in terms of age, sex, education, religion, domicile, family type, socio-economic status, and marital status. This indicates that there was no confounding effect of these socio-demographic variables. However, a significant difference was found in employment status on the variables of this study. Most patients with BPAD were employed (76.7%) contrary to patients with schizophrenia where only 30% were employed while 70% were unemployed. The difference in employment status can be substantiated by research findings which state that being unemployed has been related to lower cognitive and social functioning, higher levels of negative and depressive symptoms, as well as lower levels of education in individuals with schizophrenia (Holm et al., 2021). Unemployment found in most schizophrenia patients might be due to psychosocial impairment because of psychiatric illness as they were unable to cope on their occupational front which is also substantiated by the downward drift theory (Lapouse et al., 1956). In the present study, the mean age of the patients with BPAD was 32.07 years (SD= 7.01) and that of schizophrenia was 31.47 years (SD= 6.60) It is in congruence with the fact that both the groups were matched with respect to age. The number of men with BPAD was higher in the study, 76.7% sample of the group was male and 23.3% was female. Similarly, in the group with schizophrenia, 83.3% of patients were male compared to only 16.7% of females. It is seen that the incidence of schizophrenia is greater in men (1.4:1 male: female ratio; McGrath et al., 2004). The low percentage of female patients might also reflect the negligence of female mental health as female patients are admitted less often for the treatment of psychiatric conditions due to traditional conservative views. The males being the breadwinners of the family receive the attention of the family members and are brought to the medical facilities earlier and in preference to the females (Kumar, 2001). In our research, most patients among both

groups were educated up to secondary level, i.e., 76.7% of patients with BPAD and 80% of schizophrenia patients.

Findings on Rorschach Inkblot Test:

Psychological Resources

The experience balance (EB) ratio shows the extent to which a person is internally oriented as opposed to being more externally directed and behaviorally responsive to outside stimuli. EBratio here showed significant difference between patients with BPAD and Schizophrenia (Table 1). It indicates that patients with BPAD predominantly have extra tensive style to deal with problems in comparison to schizophrenic patients. They use their feelings in their decision-making process, on the other side schizophrenic patients are likely to prefer to keep emotions aside during decision making process (Exner, 1978).

The Experience Actual (EA) is an indicator of psychological resources that a person can always use, and a low value means that available resources are limited. On comparing patients with BPAD and schizophrenia, significant differences were seen between the two groups. According to Exner's Comprehensive System, the average range for EA in adults is between 7 and 11. The mean EA of the patients with BPAD was 5.12 (SD= 2.76), whereas for the schizophrenia group it was 3.84 (SD= 2.47). Significantly lower EA than average, i.e., below 6.5 for adults, suggests more limited available resources. The mean EA score of both the groups was found to be low suggesting poor psychological resources with the schizophrenia group having extremely poor psychological resources. In describing EA, as a "supply of inner energy" or "emotional essence", Beck seemed to imply that the EA index reflected an underlying instinctual energy force. In fact, Beck stated that the sum of human movement and color responses "communicate feeling tones derived from the id reservoir" (Beck, 1960). The forces reflected by EA lead to adjustment or maladjustment *depending* on the strength of the ego to master or direct this emotional energy or vitality. Thus, Beck originally seemed to understand EA as an emotional energy force that could be harnessed adaptively or unleashed in an explosive manner. The patients with good psychological resources in the BPAD group were 40% and, in the schizophrenia group only 26.67% (Table 2). However, 60% of the patients in the BPAD group and 73.33% of the patients in the schizophrenia group had limited psychological resources.

Capacity for Control

The AdjD score, on the other hand, affords an index of the typical or customary capacity for control. It helps to distinguish between relatively persistent and relatively situational experienced stress. There is a significant difference seen between the two groups on Adj D scores with a higher mean score of the BPAD group (M=0.58, SD= 1.07) at 0.01 level of significance. Deviant Adj D indicates relatively chronic and longstanding difficulties in one's capacity for control. Exner defined control as the "capacity to form decisions and implement deliberate behaviors that are designed to contend with the demands of a situation" (Exner, 2000). In other words, it is the ability of a person to organize and maintain control over one's thoughts, behavior, and emotions, to at least some extent, and to remain on task. It is important to remember that the controls cluster assesses only the capacity to control. In other words, the capacity to control behavior does not mean that the person will always appropriately control their impulses, thoughts, emotions, and behaviors. (Table 3).

The es sum is an index of a person's degree of disorganization and helplessness. Persons scoring high on es have a low frustration tolerance, and it is difficult for them to be persistent, even in meaningful tasks (Exner, 1978). In our research findings, the mean Experience Stimulation (es) obtained by the BPAD group is 4.42 (SD= 2.74) and that of the group with schizophrenia is 3.30 (1.81); no significant difference can be seen between the mean of both the groups. It reflects presence of disorganization & helplessness in both the groups. (Exner, 1974).

Stress Tolerance

The D Score is a further measure of the client's ability to tolerate stress. It is essentially a means of evaluating the degree of available resources the person has (EA) versus the number of disorganized events that are occurring beyond the person's control (es). The mean score obtained for the group with BPAD is 0.38 (SD=1.40) and for schizophrenia is 0.11 (SD=1.24). However, no significant difference was seen between the patients with BPAD and schizophrenia on stress tolerance (Table 4). The results confirm the findings of earlier studies (Exner 1986, 1991) concerning the poor tolerance for stress in psychotic patients. They perceive a lot of stress and lack the resources to deal with it (low D, Adj D). Stress tolerance, in contrast, is the ability of the person to tolerate stress, which, like control, can fluctuate depending on the demands of the person. The demands on the person can be external (e.g., comprehensive examinations in graduate school) or internal (e.g., depression or anxiety). In times of high demand, psychological resources are depleted, thus the tolerance for stress is decreased. Research suggests that people with schizophrenia have reduced distress tolerance as compared to healthy control samples (Chiappelli et al., 2014; Nugent, Chiappelli, Rowland, Daughters, & Hong, 2014). Early work has linked lower distress tolerance to reduced social functioning (Nugent et al., 2014), negative mood states (Stanage-Becker, 2009), cognitive deficits (Nugent et al., 2014), and psychotic symptoms (Bonfils, Minor, Leonhardt, & Lysaker, 2018; Stanage-Becker, 2009). Recent research has also shown a robust effect wherein people with schizophrenia-spectrum disorders report experiencing greater personal distress (i.e., internal, self-oriented distress upon seeing the negative situations of others) (Bonfils, Lysaker, Minor, & Salyers, 2017).

Adj D findings in the patients with BPAD is 0.58 (1.07) and, patients with schizophrenia are 0.07 (0.89). There is a significant difference between the groups on 0.01 level of significance. According to Exner's Comprehensive System, a score of zero or greater shows that people with low EA, are chronically more vulnerable to becoming disorganized by many of the natural everyday stresses of living in a complex society, which seems to be true for both our patient group.

Situational Stress

In our research (Table 4); the value of D is lower than the value of Adj D in the group of patients with Bipolar Affective Disorder. D< Adj D, is the Rorschach index of situational stress, indicates that some circumstance exists that has reduced the person's capacity for control and has caused stress tolerance to be lower than usual. They appeared to be in a state of chronic stimulus overload that reduced their capacity for control and their tolerance of stress.

Because they do not have enough resources readily available to contend with all the stimulus demands they experience. Their avoidance tendencies may be aggravated when confronted with emotional stimuli. As a result, they often become much more socially constrained. This might indicate that they function best in routine and predictable situations. Adapting to new situations presents difficulties in which they are prone to become distracted, disorganized, and impulsive. Most mania patients tend to have difficulty contending with the demands of the social model and often feel helpless or inept because of their coping limitations or deficiency. The results confirm the findings of earlier studies (Exner 1986, 1991) concerning the poor tolerance for stress in psychotic patients. They perceive a lot of stress and lack the resources to deal with it (low D, Adj D).

Conclusion:

The findings of the present study reveal that patients with BPAD & schizophrenia have significant differences with respect to various Rorschach variables. Psychological resources were poor in both groups but were extremely limited in patients with schizophrenia compared to the patients with BPAD. Poor stress tolerance was found in both groups with minimal stress tolerance in patients with schizophrenia in comparison to patients to patients with bipolar affective disorder. Situational stress is seen more in patients with BPAD, current episode mania. Capacity for control is poor in both groups; however, patients with BPAD have poorer control.

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Psychogenic Diplopia in an Adolescent: Blind Analysis through Somatic Inkblot Test

L. S. S. Manickam & B. L. Dubey

There are not many reports on psychogenic diplopia in children and adolescents which is diagnosed as 'Dissociate neurological symptom disorder, with visual disturbance' (DNSD) as per ICD-11 guidelines. Here we present a 12-year-old adolescent's case report along with his responses on Somatic Inkblot Series (SIS-II) projective test along with the interpretation of the responses. The blind analysis of the report validates the known history and indicated the need for further exploration to aid the therapeutic process. The images revealed the client's poor interpersonal relationships with his mother, father and peers, with a low self and aggressive attitude with desire to have power and authority. Clients who undergo these experiences need personal therapy to address their negative attitude and aggressive behavior. More research of SIS-II with children and adolescents may help the clinicians to unravel the 'inner cry' and help them to process the unresolved issues during psychotherapy.

Introduction:

Diplopia is the disorder of vision in which two images of a single object are seen and also called double vision(Gräf & Lorenz, 2012).Though diplopia is a frequent symptom in neurology and ophthalmology, non-organic (psychogenic) 'diplopia is relatively rare' (Gräf & Lorenz, 2012). In ICD 11 (WHO, 2018), psychogenic diplopia is classified as 'Dissociate neurological symptom disorder' (DNSD). Psychogenic diplopia is classified under 'DNSD with visual disturbance' (6B60.0) and is characterized by, "…visual symptoms such as blindness, tunnel vision, diplopia, visual distortions or hallucinations that are not consistent with a recognized disease of the nervous system, other mental or behavioral disorder, or other health condition and do not occur exclusively during another dissociative disorder" (p.51) (WHO, 2018). Among adults, if the psychological causes of the functional visual disturbances are unexplored and the disorders misdiagnosed as factious disorder may lead to detrimental effects (Pozuelo, et al. 2023). Despite the growing literature describing clinical features and natural history of adult patients with DNSD, the clinical characteristics in children have received relatively little attention. Porteous and Clarke (2009) reported a child with diplopia and there were significant adverse psychosocial factors as well as physical abuse.

Patients with Medically Unexplained Symptoms (MUS) like the psychogenic diplopia and other symptoms pose a challenge to the health service providers. They are frequently referred to different departments in the medical setting and often subjected to inappropriate investigations and treatments. In Low- and Middle-Income Countries (LAMIC) like ours, patients with MSU's consume significant health care resources as well as cause burden to the patients and their care givers. Therefore, identifying the causes of MSU at the early stage and providing them with the appropriate treatment, which requires an integrative approach (O'Neal & Baslet, 2018) assumes importance.

Cassell (1980, 1990) observed that the 'the inner cry' of the individuals may get better projected on to 'not so ambiguous stimuli' and in 1960 he developed the Somatic Inkblot Series (SIS) test. Since then, the test has evolved through research (Dubey et al., 2005), and its revised version, the Somatic Inkblot Test (SIT) has adapted modern technology for online administration, scoring and interpretation (Aneja et al., 2023; Dubey, 2020; Dubey & Dubey, 2020, 2021; Dubey et al., 2019; Singh & Dubey, 2020, 2022). Studies have established the reliability and validity of SIS (Dubey, Pershad & Cassell, 1992; Verma, 1995),

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its effectiveness in diagnosis (Rathee et al., 1998), and therapy in different clinical conditions (Dubey et al.,2005; Manickam & Dubey, 2021). Clinicians reported the usefulness of SIS in therapy, in identifying the unconscious conflicts as well as the core of 'the inner cry' of persons with physical symptoms which are of psychogenic origin in adults (Manickam et al., 2004; Manickam et al., 2013). Sanyal et al., (2006) and Sanyal (2013) administered SIS to children and adolescents and found that the test offers a 'lens' or 'window' in a non-threatening way and it provides dynamic meaning in terms of their unconscious process.

In this article we present the case report of an adolescent who was diagnosed as having psychogenic diplopia or 'Dissociative neurological symptom disorder, with visual disturbance' along with the SIS responses and its blind interpretation, which validates the psychodynamics of the client.

Brief history of the adolescent and assessment:

A twelve-year-old adolescent boy from low socio-economic background was referred by the Pediatric department to the clinic for psychological evaluation of his symptom of 'seeing everything in double' for three months. When he first experienced the symptoms, he was evaluated by the ophthalmologist in his local area, who referred him for further evaluation and treatment to the private super specialty hospital. After the evaluation at the Ophthalmology department, he was referred to the neurologist and the neurologist confirmed a functional diplopia, and he was referred to the Pediatrician.

Developmentally, since his mother had hypoglycemia while she was pregnant, she was admitted prior to the delivery in the hospital, and he was born out of full-term normal delivery. At the age of 2 he developed epilepsy and was on medication and subsequently the medication was stopped as per the advice of the neurologist. There was no delay in the miles stones of development reported and he was studying in a school near his grandmother's place and his academic performance was reported to be average. Since he started his schooling, he was staying away from his parents. His father was working away from home in a private firm and mother was working and living at another place, away from his grandmother. He was informed that his living arrangements must change from the new academic year and must be shifted from the school where he was studying, since his father was transferred to a nearby place where his grandmother was living. Since then, he complained of seeing everything in double. However, while enquiring the details for their reasons for living separately, the mother became defensive and did not give any further information. The boy also did not reveal much information and he was preoccupied in describing his symptom. Since they did not visit the hospital again, the family dynamics nor what all could have contributed to the manifestation and maintenance of the symptom could not be elicited.

On routine psychological evaluation using Bender Gestalt Test (Bender, 1938), which is a well-known and established neuro psychological test that detects signs of perceptual distortions and Draw a Person Test (Machover, 1948) there were no 'double perception' and therefore SIS-II was administered, to explore the dynamic process.

A few clinically significant responses projected on the Somatic Inkblot Test are interpreted following Content analysis, symbolism, and psychoanalytic interpretation by the co-author (BLD) who was blind to the history of the adolescent:

Image A1: "Butterfly" is a beautiful response and it indicates his wishful thinking to enjoy like butterfly.

Image A2: "Doll" indicates his craving for affection during childhood which is supported by the poor health of his mother during early childhood and he being brought up by the grandmother.

Image A6: "Inkblots". He perceived "Inkblots" and rejected the common response teddy bear playing/enjoying on this image. Rejection of this may indicate parental deprivation (due to the death of either parent, living away from parents, staying with grandparents or other relatives etc.) during childhood, particularly before the age 6 years. The findings is supported by the case history also.

Image A7: He has perceived "A Girl" and it is a good response, though "Apple" and "Dancing Lady" is most typical response in this image. Avoiding perceiving "dancing lady" may project the poor health of his mother whom he observed, since beginning, having poor health and unable to take care of the client. Further he was raised by her grandmother. The response further indicates a poor relationship with his mother.

Image A9: He has perceived "A lady" and it is a good response, though avoided two ladies or two persons which further indicates poor interpersonal relationship with his mother.

Image A12: "Fire". Hand is the Most Typical response (MT) in this image which he has avoided and perceived it as "fire" which may indicate a severe adverse situation with lots of problems and the client is feeling helpless. Such people share their problems during therapy sessions.

Image A21: "Tortoise". He did not perceive two children in this image which may indicate poor interpersonal relationships with parents/father particularly during childhood. Often the image of two children is rejected when the father/ father figure is very authoritarian / strict.

Image A27: "Stone". He did not perceived the most common response "breast**"** in this image which may indicate deprivation/ conflict with mother during childhood. Those who lost their mother during childhood, lived away from their parents, or reared by grandparents, often avoid "Torso" or "Breast" in this image.

Image A31: "White and Blue color". Couple, a man and woman are the Most Typical response in this image, which may indicate smooth interpersonal relations between man and woman/ couples. The client did not perceive the common response and it may indicate his poor interpersonal relationships with his parents.

Image B4: "Blue". Two persons, particularly father and son is the common response in this image which may indicate good interpersonal relations between father and son. Since the client has a negative attitude towards his father, he has avoided perceiving "Father and Son", and perceived it as "Blue Color" which indicates a poor interpersonal relationship between father and son.

Image B5: "Stick". Two persons, "particularly colleagues, siblings, and friends, interacting, doing something are the most common responses which he has avoided and it may indicate his poor interpersonal relationship with significant others, particularly with his parents in this case. Perception of Stick may again indicate his negative attitude towards his father and desire to have authority and power.

Image B19: "Sun". One many legged insects like spiders, sun and two hearts are the normal response in this image. A person having poor interpersonal relationship may avoid perceiving two hearts on either side. The two hearts might symbolize the affection of his father and mother, which he feels deprived of.

Image B22: "Stick". Body resting; soul leaving body; person doing yoga; or a dead person, are the common responses in this image. He perceived "Stick" and avoided the common response and it may indicate his negative attitude towards his father and desire to have authority and power. This attitude may develop into aggressive behavior later on which must be addressed during therapy sessions.

Image B27: "Rat". Instead of perceiving a "Child" the most typical normal response in this image, he perceived it as a "Rat" which indicates his negative attitude towards parents (Phillips & Smith, 1953)

Image B28: "Light ink". Mother hugging the child, mother holding the child is a most common normal response in this image which may indicate his relationship with mother. Rejection of this image may indicate conflict with mother which is already discussed in the earlier image A27.

Image B29: "Wooden stick". Running person / boy / human figure is the most common response in this image which may indicate good ego strength, positive attitude, and healthy body imagery. Rejection of common response projects his low self and inferiority.

Image B31: He perceived "Wooden stick" and avoided the most common response "Father-Mother and two children". Rejection of the common percept in this image may indicate poor interpersonal relationships with parents, among parents or among close family members. The repeated perception of "stick" may indicate the authoritarian attitude of father. It may also indicate his wishful thinking to have power, authority and social prestige which he is lacking being a child. The issue must be addressed during therapy sessions with parents.

The content analysis of the Somatic Inkblot Images indicates his average productivity and adequacy in functional intelligence, appropriate contact with reality and awareness with his surroundings. He has shown poor interpersonal relationships with his mother, father and peers. He has also shown a low self and aggressive attitude with desire to have power and authority, which may lead to aggressive behavior and maladjustment with others in future. Therapy with parents might be of much help to manage his aggressive attitude.

Findings and Discussions:

On the Somatic Inkblot test Set -A images, he gave responses to all the 31 images and in the second Set- B images also he gave responses to all the images. However, in the second set, in the later images, he gave 9 stereotyped responses (like 'light ink', 'white ink' and so on). Though the ink responses do not have any symbolic meaning, it may indicate that he was trying to avoid further exploration of the dynamic process by not responding to what was obvious in the images.

The interpretations of the Somatic Inkblot responses were done by the second author (BLD) who was aware of the age and gender but was blind to the symptoms and history of the client. The immediate interpretation of BLD seeing the 62 responses given as summary was the following: "*The responses indicated that, the client is from a single parent, left in boarding school or parents living away from the client. Children from orphanages or the children left in boarding school may give such responses. The children who feel unattended or unwanted or left behind on the mercy of God may also project such responses. The sibling relationship was not revealed"*.

Interestingly, the interpretation matched with the adverse circumstances of the adolescent. And it would be helpful to inform the mother who accompanied the adolescent to the clinic about the psychological causation of the neurological symptom with visual disturbance. This may help their participation in a treatment process that can change 'the way the brain processes information' and how the distress is expressed through physical symptoms and create new behaviors that break the established, unconscious pattern that leads to those new symptoms. A positive approach incorporating explanation and clinical assessment of visual ability and addressing adverse conditions appears to be beneficial.

Manickam and Dubey (2021) found that the administration of SIS itself can be therapeutic. Sanyal (2013) observed that responses to the SIS-II in children served as a 'therapeutic template' because of which psychotherapy may be planned. The symptom was reported to us in the month of March, when it is time for the final examinations in school and therefore, whether the academic stress had also contributed to maintaining of the symptom has to be explored. The obvious suppression of sexual responses suggests the need to explore the sexual history for which the patient did not get back for further sessions. Porteous and

Clarke, (2009) observed that the three children and adolescents' cases with medically unexplained visual symptoms they evaluated refused even to have psychiatric evaluation.

Henningsen et al., (2018) found 'patient-involving' therapies being more effective than passive ones in children with medically unexplainable symptoms. O'Neal and Basket (2018) observed that most persons with functional neurological disorders will require an integrated multidisciplinary approach to treatment. Though transparency in explaining how the symptoms work appears to help patients with functional disorders, it may be a difficult task to educate the parent who does not live with the patient or who does not engage in the process of understanding the causes of the disorders. A community based approach, wherein the mental health professional/worker visiting the patients in their homes may help improve the treatment compliance. The treatment team in turn can identify the 'secondary gains' that the patients may be receiving, help them to creatively adjust with or overcome the environmental stressors and sustain the symptom free behavior.

Conclusions:

Psychogenic diplopia or dissociative neurological symptom disorder, with visual disturbance which is a rare disorder appearing in male adolescent is reported. The administration of the projective technique, SIS helps in validating the adverse conditions of the patient along with the areas to be further probed in the therapy. The images revealed the client's poor interpersonal relationships with his mother, father and peers, with a low self and aggressive attitude with desire to have power and authority. Such clients need personal therapy to address their negative attitude and aggressive behavior. The pattern with which the brain processes the information of those with dissociate neurological symptoms may require a different approach in treatment distinct from the conventional dissociative disorders.

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What is the Somatic Inkblot Test (online version)?

The Somatic Inkblot test (SIT) is a semi-structured, projective, diagnostic instrument and an adjunct to psychotherapy. The **SIT** is available at *www.dubayhealingcenter.com*, with 30 images, was released for quick assessment, after 30 years of intense data collection on clinical, organizational, and normal groups. Researchers have reported **high reliability and validity** of the test (Dubey et al, 2019) The test can be taken in the "individual" as well as "group administration" settings.

The SIT automates the entire "psychological test life cycle" including administration, scoring, interpretation, reporting and diagnostic collaboration. In addition to quantitative analysis, the SIT facilitates and emphasizes content analysis, psychoanalytic interpretation, and symbolic interpretation via a database of research made available as "hints", "Artificial Intelligence" and case studies. It takes about 30 minutes to complete the test.

The SIT images evoke symbolism and meanings unique to the responding individual. The test responses can be differentiated from peer norms and clinical indices and can be analyzed according to internationally recognized psycho-diagnostic criteria. The procedure is an adjunct to psychotherapy because responses can be further explored to create a more effective treatment plan and can be re-addressed in later discussions.

The SIT has an simple 11 scoring indices common to Rorschach, such as R, H, A, At, Sex, MT/P, Movement, Rejection and Pathological responses. The Test was administered to different clinical groups and business executives, and the findings were very encouraging.

Please visit our website: http://www.dubayhealingcenter.comand take the test to see its simple administration, scoring and interpretation. Please feel free to write for more information and help on our email given below:

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Family Conflict in Dysthymia and Preoccupation with Unusual Bodily Sensations: A Case Study with the help of Somatic Inkblot Test and Sack's Sentence Completion Test

Swati Agarwal & Satyadhar Dwivedi

Dysthymia, a persistent depressive disorder, manifests as a chronic state of depressed mood. Its prevalence in the general population is estimated to be around 1% to 2%, with a higher incidence in women compared to men. The utilisation of innovative psychological assessment tools like the Sentence Completion Test and Somatic Inkblot Test provides a nuanced understanding of an individual's perceptual and cognitive processes related to bodily sensations and emotional experiences. By integrating familial lens into the exploration of dysthymia and heightened fixation on unusual bodily sensations, this study endeavours to unravel the potential role and impact of family dynamics in shaping the experiences of individuals grappling with this intricate intersection. Mr. Y.C. is a 33 year old male, Graduate Engineer (B. Tech) and currently unemployed. His chief complaints were of sad mood, feelings of loneliness, lack of concentration, loss of pleasure in things he previously enjoyed, indecisiveness and uncomfortable body sensations such as stiffness in body and sensation of heat in certain parts of body. He reported having sexual relationships with several partners but not able to build an emotional attachment with anyone. The findings on assessments reveal parental conflict that contributes to his symptoms of dysthymia and heightened preoccupation with bodily sensations. Furthermore, his conflicted relationship with mother also reflects internalised aggression and frustration, which impacts his ability to maintain a healthy romantic relationship with any woman. The weekly therapy sessions spread over a period of 4 months have led to improvement in socio-occupational functioning as the patient is now working as an IIT coach in a coaching centre. Future interventions will focus on developing conflict resolution strategies and promote constructive ways to address and resolve family conflicts.

Introduction:

Dysthymia, a persistent depressive disorder, manifests as a chronic state of depressed mood. Its prevalence in the general population is estimated to be around 1% to 2%, with a higher incidence in women compared to men. Epidemiologically, it often begins in adolescence or early adulthood, potentially lasting for years if left untreated. Family conflicts can significantly contribute to the development and perpetuation of dysthymia. Constant tension, unresolved issues, or dysfunctional communication patterns within the family unit can create a stressful environment that exacerbates or triggers symptoms. The chronic nature of dysthymia often intertwines with familial dynamics, with conflicts amplifying the ongoing depressive symptoms, leading to a challenging cycle that can be tough to break without intervention and support.

The utilisation of innovative psychological assessment tools like the SCT and Somatic Inkblot Test provides a nuanced understanding of an individual's perceptual and cognitive processes related to bodily sensations and emotional experiences. By integrating these assessments with clinical observations and psychosocial histories, this paper aims to illuminate the family dynamics in a detailed case study of a patient with dysthymia and an increased fixation on unusual bodily sensations. Moreover, family conflict has emerged as a crucial factor in the manifestation and perpetuation of various mental health conditions, including dysthymia. The complex interactions within familial relationships can significantly influence the development and maintenance of psychological distress and somatic preoccupations in individuals (Chen et al., 2017). By integrating this familial lens into the exploration of dysthymia and heightened fixation on unusual bodily sensations, this study endeavours to unravel the potential role and impact of family dynamics in shaping the experiences of individuals grappling with this intricate intersection.

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Case History:

Mr. Y.C. is a 33 year old male, Hindu, from upper middle socio economic status, hailing from urban background, Graduate Engineer (B. Tech.) and currently unemployed. His chief complaints were of sad mood, feelings of loneliness, lack of concentration, loss of pleasure in things he previously enjoyed, indecisiveness and uncomfortable body sensations such as stiffness in body and sensation of heat in certain parts of body. His father had the history of anxiety and insomnia.

The patient reported experiencing a depressed mood for eight years. He reported that there was a lack of initiative in anything on his part. After B. Tech he worked as a teacher in several coaching institutes but he kept leaving the jobs after losing concentration on work. He reported feeling uneasy while working, hot flashes in the body and mental fogginess. He is unable to keep a long-term relationship with anyone.

He had intimate relationships with several females but could not make an emotional attachment with anyone. His first intimate contact with a woman was at the age of 16 years who was 10 years older than him. He mentioned not being able to have a conversation with anyone for more than 10 minutes as he feels uncomfortable talking about himself. Currently, he keeps searching for a female partner online, until he loses interest. The patient has reported going to Vipassana centres and completed 10 days courses multiple times in the past 2 years. He reports feeling better after the completion of each course, but after 15-20 days again starts experiencing low mood. Currently he is taking treatment from Institute of Mental Health and Hospital Agra for the above symptoms.

The patient reported that his father has suffered from anxiety and insomnia since his childhood. He has never experienced any closeness with his father. He feels closer to his mother, but he feels that she did not treat him and his siblings equally. He has seen his father being physically violent towards his mother many times. Due to his unemployment, often he gets critical comments from his father which makes him sad. He does not talk to his father and feels upset when his mother compares him with his siblings and keeps nagging him.

Methodology:

Somatic Inkblot Test Booklet version was administered on the patient following standard procedure (Cassell & Dubey, 1990, 2003 and Dubey et al, 2019). The patient's responses and the rejected images were analysed using content analysis and psychoanalytic interpretation. In addition, Sacks Sentence Completion Test was administered to further explore the inner conflicts of the patient.

Test Findings and Discussions:

Somatic Inkblot Test:

A few Clinically significant responses on SIS are interpreted ahead following content analysis and psychoanalytic interpretation:

A1: "Creature faces with long noses" may reflect his conflict with own self-image and focus on bodily features in a negative way. Long nose connotes male phallic symbol which may project his sexual preoccupation which is supported by the case history (Shafer, 1954).

A3: "Blood Spot". This response may indicate hostile and sadistic impulses and impulsivity and poorly controlled impulses (Schafer, 1954). Perceiving blood on achromatic image may also indicate destructive impulses, sadistic but contraindicates direct acting – out and conversion tendency (Philips & Smith, 1953).

A5: "Heart and Smile." are normal responses which indicate his desire to have a happy life.

A9: He viewed it as "Female body without a head". The patient failed to perceive a dancing female - the Most Typical response in this image and projected the "female body without a head" indicates pent-up aggression and frustration towards females. He had physical relationship with several females

without intimate relationship might have led to such hostile attitude towards females. Avoiding perceiving dancing male and female may also indicate disturbed romantic life.

A12: "Snake covering his baby", may indicate his desire to be protected as a child which he expected from his mother but was deprived from it leading to frustration. This reflects his craving for maternal affection that he felt was lacking during his childhood. The Fatus is the normal response in this image.

A15: "Meat or Organ" may indicate physical problems or somatic pain. This may also reflect his preoccupation with bodily sensations.

A19: "Intestines or could be some elongated creature". This is unusual as he correctly perceives the anatomical image in the blot, but because of the threat of phallic material, it was perceived as a safer image of elongated creature of some kind. This may reflect certain oedipal issues involving himself and mother.

A24: "Hugging humans". May indicate his desires to have good interpersonal relationship with others.

A26: "Ultrasound figure with dinosaur-like features". This may reflect the aggression that he felt throughout his childhood in response to conflicted relationships with his mother and father.

A27: "Cartoon-like creature". The avoidance of Most Typical response of the "female breast", may indicates deprivation of affection with mother during his childhood.

A28: "Female scratching with nails on male body." This reflects his sexual preoccupation, which is aggressive in content, representing sexual conflict.

B27: He perceived it as "Ugly alien-like creatures". A child is the most typical response in this image. Avoiding perceiving a child may indicate conflict with mother and deprivation of affection from his parents which he shared during intervention session.

On Sack's Sentence Completion Test, major conflicts were revealed in four areas: attitude towards family members, attitude towards heterosexual relationship, guilt feelings and attitude towards own abilities. On the items related to attitude towards family members, the patient reported that his family was less exciting as compared to others. This is supported by the findings on SIS as well, which consistently reveals his frustration because of family conflicts. He has expressed his guilt about previous sexual drives and encounters in the past. Furthermore, his responses on items related to heterosexual relationships reveals conflicts in sexual areas. A similar response was found in SIS where the patient had perceived Blood spots, long nose and female body without head which reveals his pent-up aggression and frustration towards the opposite sex.

Intervention:

Over a period of 4 months, weekly sessions were conducted which centred around providing a safe space for the patient to express and process his feelings without judgement. The sessions focused on identifying maladaptive thought patterns, challenging cognitive distortions related to bodily preoccupations. In addition, the patient had attended multiple 10-day intensive meditation training courses in the tradition of Vipassana Meditation. He was continuing his practice at home during treatment. The practice centred around the principle of equanimity, which is a state of awareness where an individual neither craves for a positive experience nor feels an aversion for unpleasant experience. This meditation practice helps the patient become more aware of their emotions without judgement. This technique aimed to enhance the patient's emotional regulation skills and promote self-compassion. Activity scheduling was implemented to boost the patient's activity levels and enhance their sense of mastery and pleasure. The negative thoughts related to the exercise were addressed during the sessions. The cognitive distortions identified were catastrophizing, dichotomous reasoning, jumping to conclusion and excessive monitoring of the bodily symptoms. Cognitive restructuring was done through Socratic questioning. A supportive and compassionate space was provided to the patient where he was allowed to process his guilt related to previous sexual

activities. The therapist provided the patient with information about healthy sexual behaviours, consent, and boundaries to help them differentiate between consensual and non-consensual experiences. This aimed to reduce the patient's self-blame and guilt by fostering a clearer understanding of the complexities of sexual interactions. Coping strategies were introduced collaboratively with the patient to manage feelings of guilt effectively. These strategies included acceptance, relaxation techniques, and setting healthy boundaries in relationships. After 4 months of intervention, the patient got employed as an IIT coach in a coaching institute happily and continuing therapy to deal with the challenges in life.

Conclusion:

The low number of human responses depicts problems in interpersonal relationships and the high number of anatomical responses indicates conflicted self-image and preoccupied with bodily sensations. Other responses indicate conflict with parents, sexual conflict, and deprivation of affection during childhood. Furthermore, his conflicted relationship with mother also reflects internal aggression, which impacts his ability to maintain a healthy romantic relationship with any woman. Engaging in several sexual encounters, may be acting as release of this internal aggression that has formed due to maternal conflict.

The present case study has revealed the sensitivity of projective assessments such as the Somatic Inkblot Test and Sack's Sentence Completion Test in assessing family conflicts. These assessments serve as a cornerstone in identifying potential risks or harm within familial relationships, shedding light on complex issues such as neglect, or dysfunctional interactions. By delving into family dynamics, these assessments uncover patterns of behaviour, power imbalances, and communication breakdowns that could jeopardise the well-being of individuals, especially children. Their importance lies not only in detection but also in intervention and prevention, providing an opportunity to address conflicts early, offering support, and implementing strategies to foster healthier family environments. The patient is now working as an IIT coach and showing improvement.

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SIS JOURNAL OF PROJECTIVE PSYCHOLOGY AND MENTAL HEALTH: ACHIEVEMENTS

Journal in WHO's Listing

Members of Somatic Inkblot Society will be glad to know that SIS Journal of Projective Psychology and Mental Health has been listed by World Health Organization (Global Forum for Health Research) among 25 indexed journals that have published the highest number of articles on mental health from LMICs in Latin America, Africa and Asia (Medline and PsycINFO). Extract from table-6 of "Research Capacity for Mental Health in Low - and Middle - Income Countries: Results of a Mapping Project "(www.globalforumhealth.org) is given below:

Rank	Journal	Country	Language
1	Revista de Psicoanalisis	Argentina	Spanish
2	Revista de Neurologia	Spain	Spanish
3	Revista Brasileria de Psiquiatria	Brazil	Eng.,Spani.,Portuguese
4	Arquivos de Neuro-psiquiatria	Brazil	Portuguese
5	Acta Psiquiatrica y psicologica de Amercia Laina	Argentina	Spanish
6	Journal of the Medical Association of Thailand	Thailand	English, Thai
7	British Journal of Psychiatry	UK	English
8	Acta Psychiatrica Scandinavica	Denmark	English
9	Salud Mentale	Mexico	Spanish
10	Vertex	Argentina	Spanish
11	Journal of Personality and Clinical Studies	India	English
12	Social Psychiatry and Psychiatric Epidemiology	Germany	English
13	Revista Medica de Chile	Chile	Spanish
14	South African Journal of Psychology	South Africa	Afrikaans, English
15	Psychological Reports	USA	English
16	South African Medical Journal	South Africa	Afrikaans, English
17	The Australian & New Zealand Jr. of Psychiatry	Australia	English
18	International Journal of Social Psychiatry	U. K.	English
19	Psychiatry Research	Ireland	English
20	Social Science & Medicine	U. K.	English
21	Revista De Saude Publica	Brazil	Portuguese
22	International Journal of Geriatric Psychiatry	U. K.	English
23	**SIS Journal of Projective Psychology and Mental Health**	**India**	**English**
24	Journal Brasilerio de Psiquiatria	Brazil	Portuguese
25	Psychiatry and Clinical Neurosciences	Australia	English

Journal in ProQuest Listing:

We are glad to inform you that SIS Journal of Projective Psychology & Mental Health has been listed in academic research database ProQuest Psychology Journals™. ProQuest is a company in Michigan, United States. It is a leading provider of electronic databases for academic libraries. Databases are used in over 20,000 academic libraries around the country and around the world including some of the most prestigious higher education institutions such as Harvard, Yale, Princeton, Oxford etc. ProQuest provides abstracts and indexing for more than 640 titles, with over 540 titles available in full text. Users get access to charts, diagrams, graphs, tables, photos, and other graphical elements essential to psychological research.

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