Journal of Traumatic Stress, Vol. 4, No. 3, 1991

Brief Report

The Rorschach and PTSD Revisited: Critique of Van der Kolk and Ducey's (1989) "The Psychological Processing of Traumatic Experience: Rorschach Patterns in PTSD"

Leo Cohen[1] **and Corine de Ruiter**[2,3]

Accepted October 1, 1990

An article which appeared in the Journal of Traumatic Stress, 2: 259-274, on the Rorschach and PTSD, is criticized on methodological and general scholarly grounds. Special focus was given to the authors' treatment of Rorschach protocols and Rorschach data. The scientific contributions of the study are reviewed.

KEY WORDS: Rorschach; PTSD.

INTRODUCTION

Post-traumatic stress disorder (PTSD) was included for the first time in the 1980 edition of the DSM-III (American Psychiatric Association, 1980). Because of its relative novelty as a separate diagnostic entity, research into the phenomenology of the disorder and into the psychological characteristics of the patients stricken with the disorder is very welcome. The MMPI has been used in several studies, resulting in a special MMPI-PTSD subscale (Keane *et al.*, 1984). Research with other psychological instruments, such as the Rorschach, could provide further insight into the disorder.

[1]Department of Medical Psychology, Free University Hospital, De Boelelaan 1117, 1081 HV Amsterdam, The Netherlands.
[2]Department of Education, Center for Child and Family Studies, University of Leiden, P.O. Box 9555, 2300 RB Leiden, The Netherlands.
[3]To whom reprint requests should be addressed.

0894-9867/91/0700-0407$06.50/0

The study of Van der Kolk and Ducey (*Journal of Traumatic Stress 2*: 259-274) is the first research we know of that uses the Rorschach with patients diagnosed PTSD and it immediately evoked our interest. The authors contend that the core element of PTSD is an alternation and/or combination of intrusive reexperiencing and symptoms of avoidance. The study on which they report was guided by the hypothesis that this "biphasic" quality would be manifested in the Rorschach protocols of PTSD-patients.

The authors compare Rorschach protocols of 13 Vietnam veterans with PTSD suffering frequent nightmares with Rorschach protocols of 11 non-PTSD Vietnam veterans. They consider both structural and content features of the protocols. Data from the PTSD sample are also compared with normative data for nonpsychotic outpatients (Exner, 1978).

The reader of a scientific journal research paper generally expects to see: (1) use of reasonably sized samples, where possible (2) use of relevant control groups; (3) use of reliable and valid scoring and interpretation methods; (4) sound statistical analyses; and (5) sound theoretical discussion. Furthermore, the article should be well organized and written clearly and concisely (American Psychological Association, 1985).

In our opinion the article by Van der Kolk and Ducey fails to meet these expectations. In this paper we will attempt to address some notable shortcomings in a systematic fashion. First, we will restate each of Van der Kolk and Ducey's findings, the interpretations they attach to these findings, and critically discuss both.[1] Secondly, we comment on their Rorschach methodology. Finally, we present some general comments on the paper as a whole.

FINDINGS AND INTERPRETATIONS OF VAN DER KOLK AND DUCEY

1. M:(M + Weighted Sum C)

Finding

Van der Kolk and Ducey report that the PTSD subjects had a mean M:(M+Sum C) ratio of 0.23 while the mean of their control subjects was 0.41 (t=2.02, df=22, p<0.06).

[1]We believe we have teased out all of Van der Kolk and Ducey's findings and note that they failed to present these systematically.

Interpretation

We assume that when the authors refer to "Sum C" they mean the "weighted Sum C" (= 0.5 ΣFC+ΣCF+1.5 ΣC). The authors' description of their result as "nearly significant" is methodologically questionable. However, for the sake of argument, we will treat the finding as legitimate. The authors interpret this finding as suggesting that PTSD subjects "experience affective stimulation (Sum C) in excess of their capacity to process, control, and delay the impact of trauma through the 'higher' symbolic capacities for thinking, reflection, planning, and perspective-taking represented by the M response" (p. 264).

Comment

The finding indicates that the proportion of M to M+Weighted Sum C responses was lower for PTSD subjects than for the nonPTSD, nonnightmare controls.

There are a number of problems with Van der Kolk and Ducey's interpretation of their finding. First, the authors refer on the one hand to "experiencing affective stimulation" and on the other hand to the "capacity to process, control and delay the impact of trauma through the 'higher' symbolic capacities." The experiencing of affective stimulation is linked by the authors to the magnitude of Weighted Sum C. The capacity to process the impact of trauma through symbolic capacities is linked to the magnitude of M. The authors speak of an "in excess of" relationship between the two terms, in this case of excess Weighted Sum C relative to M. We believe the authors make an important conceptual error here. An "in excess of" relationship implies the desirability of some sort of balance between the two terms and/or a preferred one-directional imbalance. The authors seem to think that a high Weighted Sum C relative to M precludes the possibility of adequate or adaptive "higher" processing. In any event, the introduction of an "in excess of" relationship between the M and Weighted Sum C terms does not fit with current understanding of these terms.

The total of M and Weighted Sum C is referred to as the Experience Actual in the Comprehensive System (EA; Exner, 1986). In Exner's (1986, p. 322) opinion there is substantial support for the assumption that both components of EA—M and Weighted Sum C—are related to "*deliberately* initiated psychological behaviors."[2] The *extent* to which M

[2]In this discussion of Van der Kolk and Ducey's findings we shall frequently refer to empirically substantiated conclusions regarding Rorschach variables drawn by Exner (1986) and to the way these have been incorporated in the Comprehensive System he and his

preponderates over Weighted Sum C (or vice versa) determines whether an individual will be classified as introversive (when M exceeds Weighted Sum C by 2 or more), extratensive (when Weighted Sum C exceeds M by 2 or more) or ambitent (differences between M and Weighted Sum C less than 2). Introversives and extratensives exhibit different but equally viable psychological styles. For example, in problem solving, introversives "prefer to delay final decisions until they can mentally review alternatives and potential results" (p. 325) and extratensives "appear to be trial-and-error oriented, willing to make errors as a trade-off for the information they receive" (p. 329). Despite their different approaches in problem solving, introversives do not exhibit superiority relative to extratensives. Ambitents, however, seem to be somewhat disadvantaged by the lack of a clearly defined style. For instance, they are more vulnerable to psychopathology.

Second, we question the authors' implication that trauma can *only* be processed through the "higher" symbolic capacities. Can the impact of trauma not be processed through experiencing affective stimulation? Van der Kolk and Ducey provide no justification or reasoning for their linkage.

Third, we are also disconcerted by the fact that Van der Kolk and Ducey make use of the M to M+Weighted Sum C ratio. There are two problems with the use of this ratio: (1) The M:(M+Weighted Sum C) ratio cannot be used to classify individuals as introversive, extratensive or ambient. An individual with an *Erlebnistypus* (EB; balance of M to Weighted Sum C) of $3:4^1/_2$ is considered ambitent. An individual with a 6:9 balance is considered to be extratensive. The M to M+Weighted Sum C ratio used by Van der Kolk and Ducey, however, is the same for both. (2) Information concerning the magnitude of available psychological resources is lost when using the M:M+Weighted Sum C ratio. In the example given above, the extent of psychological resources available for formulating behavior is considerably greater for the second than for the first individual. Van der Kolk and Ducey's two groups may *not* have differed in the mean magnitudes of their M resources.[3] Theoretically the PTSD subjects may even have had greater mean M than the control subjects. Finally, even if mean Weighted Sum C was greater for the PTSD than for the control subjects (a finding which one would expect to have been reported had it been found), this does not—as we have pointed out above—necessarily indicate diminished capacity to process, control, and delay the impact of trauma. An alternative

co-workers developed. The Comprehensive System is regarded as the empirically most advanced, sophisticated and valid Rorschach approach to date (Hertz, 1986).

[3]M:(M+Weighted Sum C) ratios of 0.23 and 0.41 imply M:Weighted Sum C ratios of approximately 0.30 and 0.70, respectively.

interpretation, offered by one of our reviewers, is that a higher proportion of C responses to M responses reflects an adaptation to combat where affectively stimulating situations must be responded to with quick decisions and action. Combat veterans with PTSD may still be relying on the skills that helped them survive. The hypothesis that combat exposure affects the Erlebnistypus in such a way as to increase Weighted Sum C and/or decrease M requires further study.

2. High m

Finding

Van der Kolk and Ducey found a greater number of inanimate movement (m) responses among patients in the PTSD group (M =3.64) than for control subjects (M =1.18, t = 2.89, df =194, $p < 0.001$).

Interpretation

Unfortunately, the authors provide no interpretation for this finding. They refer only to this finding "for its strength and the light it throws upon the internal representation of traumatic experience" (p. 264).

Comment

If m refers to internal representations, how can the authors be sure that representations of *trauma* are involved? m responses are found in all groups of subjects tested with the Rorschach. Research concerning the m determinant has established its relationship to the sense of disruption of controls under stress (Exner, 1986). For instance, Shalit (1965, cited in Exner, 1986) collected retest Rorschachs from 20 Israeli seamen under the stress of being on a small ship during a heavy storm. All 20 had been tested 1 year earlier, when entering the Israeli Navy. He found that the retest frequencies for M and FM remained the same, but the m frequencies increased significantly when tested immediately after the storm. m is related to situational stress, and is an unstable Rorschach variable with test-retest correlations between 0 and 0.30 (Exner, 1986).

Elevations in m are not necessarily expected in the absence of situational stress. In a study by de Ruiter *et al.* (1989), for example, anxiety disorder patients, though manifesting high levels of anxiety, did not show elevations in m. The high m found by Van der Kolk and Ducey in their

PTSD patients therefore requires explanation. It may be that even though the stress of war is no longer present, the PTSD veterans are (re-)experiencing this stress, and that this is reflected in the high m. Such an explanation would be consistent with Van der Kolk and Ducey's understanding of PTSD. Alternatively, individuals with PTSD may be experiencing high levels of current stress created by the PTSD symptoms, such as the stress produced by sleep disturbances.

3. Particular Contents and Verbalizations

Finding

Van der Kolk and Ducey note the presence of "extensive and frequently gory blood anatomy content" and "uncensored and uncontrolled references to traumatic Vietnam experiences" (p. 263).

Interpretation

The authors present illustrations of gory blood and anatomy contents as well as verbal references to Vietnam experiences "to illustrate the undigested, unsymbolic reliving of traumatic experiences provoked by the color cards" (p. 264).

Comment

We would have liked to see the authors code these responses according to an established method for the aspects which they consider significant. The Comprehensive System of Exner and his co-workers (Exner, 1986) provides a formal method for coding content and peculiar verbalizations. Sum totals for these codes, and indices incorporating them, lend themselves for interpretations based on normative data. Many relevant features could have been captured in codes such as *An* (anatomy), *MOR* (morbid) and *DR* (deviant responses). Elevations in *An* suggest body concern (Exner, 1986, p. 398). *MOR* scores provide information about problems in self-image or self-concern (Exner, 1986, p. 397). According to Exner (1986) *DR*'s "illustrate a peculiarity in the verbiage of the subject that may be the product of poor judgment, but more likely illustrate poor control over ideational impulses. [. . .] Larger numbers of *DR* answers suggest that patterns of disjointed thinking may exist which can interfere significantly with effective decision making" (p. 376). The presentation of the frequency of *DR*

responses, for example, could have provided clearer support for their conclusion of "diminished ego control."

Second, we criticize Van der Kolk and Ducey's statement that the "specifically listed" responses of Table I (p. 263) "illustrate the undigested, unsymbolized reliving of traumatic experiences . . ." (p. 263). The authors imply that *all* these responses are unusual, which is by no means the case. Some of the individual percepts are frequently reported by nonpatients, e.g., pelvis, anatomy, vertebrae and rats to Card VIII.

4. Conventional and Vague Form Quality

Finding

Van der Kolk and Ducey report that their PTSD patients showed an "interesting combination of (1) heavy emphasis on conventional ('ordinary') form at the expense of sharp and accurate perception, and (2) a very high proportion of the otherwise rare vague and amorphous (formless) [Mayman] categories" (p. 265).

Interpretation

The authors write: "This combination seems to use a counterpart of the duality of response to trauma, not only in the Rorschach experience balance reported here . . . but also in our understanding of the biphasic cognitive processing of traumatic experience (rigidly defended, affectively numbed, versus affectively overwhelmed and threatened sense of psychic integrity)" (p. 265).

Comment

First of all, the authors do not explain what they consider to be "interesting" about the *combination*. Is such a combination not found elsewhere? Are the individual findings (heavy emphasis on conventional form and high proportion of vague/amorphous form) not of significance or "interesting" by themselves? Second, the authors offer no data in support of their statements. They write, "We shall not report here in any systematic way Rorschach findings beyond the determinants . . ." (p. 265). Yet, does this relieve them of the obligation to do so? The authors provide insufficient information to allow a proper evaluation of these two "findings."

5. Elevated Thought Disorder Index

Finding

Van der Kolk and Ducey report a "frequent marked elevation of scores on Johnston and Holzman's (1979) thought disorder index in PTSD sufferers" (p. 265).

Interpretation

The authors interpret this finding as evidence of "the disorganizing impact of the reexperience of trauma" (p. 265).

Comment

The authors again fail to present data in support of their finding. In our opinion, the report of the finding requires the presentation of a statistical summary of the results. In the absence of such a presentation the reader cannot assess the finding.

Assuming that the finding is valid, several alternative explanations are available yet are not presented by Van der Kolk and Ducey. In the first place, the disorder in thinking assessed by Johnston and Holzman's measure may have been present in PTSD subjects *prior* to traumatization. Conceivably, a preexisting thought disturbance *predisposes* individuals placed in traumatic circumstances towards developing PTSD. Secondly, the finding does not necessarily point to a disorganizing impact of *reexperiencing* the trauma. The thought disorder may be a characteristic of PTSD patients aetiologically independent of the reexperiencing of trauma.

RORSCHACH METHODOLOGY

We noted a number of major weak points in Van der Kolk and Ducey's Rorschach methodology. First, the authors employ various Rorschach systems in their treatment of the protocols in an unsystematic fashion. Among the systems employed are those of Exner (1974, 1978), Mayman (1970: p. 265; no reference is given) and Johnston and Holzman (1979). They present no arguments for selecting one system in one place and another elsewhere. An account of their general Rorschach approach in this study would have been welcome. For instance, the authors make

use of Exner's (1978) normative data without indicating whether they scored according to the Comprehensive System.

Second, the authors appear to be unaware of the recent modifications introduced by Exner in the Comprehensive System (Exner, 1986). These modifications might have obviated the need for the Johnston and Holzman thought disorder index.

Third, the authors make use of short protocols. In the presentation of their case history (p. 266-267) they rely on a protocol consisting of only 10 responses. There may have been more protocols with a low number of responses. The reliability of protocols with fewer than 14 responses has been called into question by Exner (1988) who pointed out that retest reliability coefficients for the majority of variables are unsatisfactory in brief protocols ($R<14$). Retesting the patients with low R could have provided longer and more valid protocols. In any event, the authors should have reported the distribution of R for the patients in their reference and control groups.

Fourth, as we noted earlier, some common Rorschach responses are presented as unusual ones.

Fifth, selected interpretations of two blind Rorschach assessors are used as illustrations, but no effort is made to treat the assessors' comments formally.

GENERAL COMMENTS

Van der Kolk and Ducey's article shows shortcomings in methodology:

(a) The sample sizes are small: 13 PTSD patients and 11 control patients. Though important findings can be gained from studies with small samples, considerable caution needs to be exercised when generalizing the findings from such studies.

(b) The authors do not provide adequate control groups. Their target group consists of PTSD patients *who are suffering from frequent nightmares.* Their control group consists of war veterans who are suffering from *neither* PTSD *nor* from frequent nightmares. The reference and control groups therefore differ in terms of *two* features (PTSD and nightmares). The authors could have included a sample of nonPTSD nightmare patients or, theoretically, could have focused on PTSD veterans without nightmares. An acknowledgment of the limitations for generalization set by the nature of the sample could have been expected.

(c) The authors entertained a theory, the "bi-phasic quality of the trauma response," but generated no clear hypotheses from it. The authors claimed that their findings support the theory but they failed to subject it to a test.

(d) As we pointed out earlier, the authors fail to provide the requisite statistical evidence in support of a number of their findings.

Second, Van der Kolk and Ducey's paper exhibits a number of failings in scholarship:

(a) The authors frequently fail to cite work where such citation is called for. For example, the authors explain the interpretive significance of human movement (M) and color (C) responses but do not indicate the source of these interpretations (p. 262, second paragraph). Reference is made to "factor analyses in the research literature" (p. 262), "published factor analyses" (p. 263) "the empirical literature" (p. 268) but no references are provided.

(b) The authors make use of suggestive language in places where precision is required. In their clinical illustration they refer to the response to Card I, first administration, as "bland" (p. 267). The response, "a bat, sort of like the head, the wings spread, and the body" (p. 266), is by no means clearly "bland." In fact, it is a common response among nonpatients. More serious, however, is their reference to this response as evidence of "bland denial" (p. 267). Such a form of argumentation is not appropriate in a scientific paper.

(c) The discussion is excessively long and in many places unrelated to the findings.

In summary, Van der Kolk and Ducey have made a scientific contribution. They have found that as a group PTSD patients suffering from nightmares may exhibit (1) low Weighted Sum C relative to M and (2) have high m in their Rorschach protocols. Unfortunately the published article of Van der Kolk and Ducey falls short of many accepted standards. Their paper could discredit those who work with the Rorschach [especially by means of the Comprehensive System (Exner, 1986)] in a scientific fashion.

ACKNOWLEDGMENTS

We appreciate the critical comments received from Dr. H. F. A. Schalken and Dr. John E. Exner, Jr. on an earlier version of this manuscript.

REFERENCES

American Psychiatric Association (1980). *Diagnostic and Statistical Manual of Mental Disorders*, Washington, D.C.: Author.

American Psychological Association (1985). *Publication Manual of the American Psychological Association*, Washington, D.C.: Author.

Exner, J. E. (1978). *The Rorschach: A Comprehensive System, Vol. 1*, Wiley, New York.

Exner, J. E. (1986). *The Rorschach: A Comprehensive System, Vol. 1: Basic Foundations* (second edition), Wiley, New York.

Exner, J. E. (1988). Problems with brief Rorschach protocols. *J. Personal. Assess.* 52: 640-647.

Hertz, M. R. (1986). Rorschachbound: A 50-year memoir. *J. Personal. Assess.* 50: 396-416.

Keane, T. M., Malloy, P. F., and Fairbank, J. A. (1984). Empirical development of a MMPI subscale for the assessment of combat-related posttraumatic stress disorder. *J. Consult. Clin. Psychol.* 52: 888-891.

van der Kolk, B. A., and Ducey, C. P. (1989). The psychological processing of traumatic experience. Rorschach patterns in PTSD. *J. Traum. Stress* 2: 259-274.

Mayman, M. (1970). Reality contact, defense effectiveness, and psychopathology in Rorschach form-level scores. In Klopfer, B., Meyer, M., and Brawer, F. (eds.), *Developments in the Rorschach Technique. III: Aspects of Personality Structure*, Harcourt Brace Jovanovich, New York, pp. 11-46.

de Ruiter, C., Schalken, H. F. A., Derksen, J. J. L., and Cohen, L (1989, July). The Rorschach test in panic patients. Paper presented at the First European Congress of Psychology, Amsterdam, The Netherlands.

Shalit, B. (1965). Effects of environmental stimulation on the M, FM and m responses in the Rorschach. *J. Proj. Tech. Personal. Assess.* 29: 228-231.