

## Verification of Rorschach Indicators of Sexual Abuse

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**We attempted to find Rorschach indicators of sexual abuse. In the present study, we investigated the propriety of 4 indicators that we reported in 2001 and more precise indicators of sexual abuse through statistical analysis of Rorschach records of 108 female psychiatric patients with a history of sexual abuse and 48 female psychiatric patients without it. We defined the sex locations on the Rorschach cards and took notice of the particular responses for them. Eighty-two of the 108 (76%) sexually abused patients and 1 of the 48 (2%) non-abused patients gave the sex response, inanimate movement response (m) or m tendency for the sex locations. Aggression and hostile responses were scored by Mürstein's Rorschach hostility scale; the scores for the abused was  $19.99 \pm 15.96$  and for the non-abused,  $12.37 \pm 8.57$ . Number of form-color (FC) response equal to or lower than the total of color-form (CF) response and pure color (C) response ( $FC \leq CF + C$ ) was shown in 95 of the 108 (88%) abused and 30 of the 48 (63%) non-abused. Among these 3 items, the differences between the 2 groups were remarkably significant ( $P < 0.001$ ). It becomes obvious that the 3 indicators as shown below are valid for finding sexual abuse histories for differential diagnosis: i) a host of aggression and hostile content; ii) loss of control in color responses, for example  $FC \leq CF + C$ ; and iii) the sex responses, m or m tendency for sex locations.**

**Key words:** psychiatry; Rorschach test; sexual abuse; statistical study

In Japan as well as in other countries, the reporting of child abuse and sexual violence has been increasing. As Maruta pointed out, many women who have experienced sexual abuse visit psychiatric hospitals with various symptoms (Maruta, 1995). However, the trauma of sexual abuse is rooted deeply in their personalities and significantly involved in their symptoms, and they can hardly relate their pain to their doctors or therapists not only in the first interview but also during the treatment process. It is a matter of everyday occurrence that they have entirely forgotten the sexual abuse itself. For clinical psychologists, one of the most

important responsibilities is to help patients understand their buried emotions or behavior tendencies using projective psychological testing. We have tried to find Rorschach indicators of sexual abuse so that these indicators may help sexually abused patients speak freely and express the harm that has been done to them in order to cope therapeutically. Among preceding studies using projective psychological testing such as the Rorschach test, there were some excellent case studies (Hurt, 1991; Ornduff, 1997), research that attempted to understand the pattern of behavior and/or personal relationship of sexually abused patients (Cerny,

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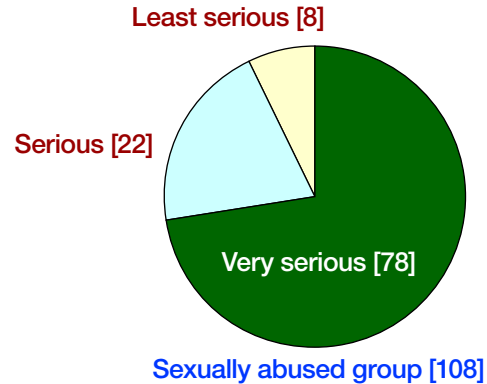
Abbreviations: C, pure color response; CF, color-form response; dr, rare detail response; FC, form-color response;  $FC \leq CF + C$ , number of FC equal to or lower than the total of CF and C; Fc, form-texture response; ICD-10, The International Statistical Classification of Diseases and Related Health Problems 10th Revision; m, inanimate movement response; shading %, percentage of the shading responses in all response

1990; Leifer et al., 1991; Briere and Elliott, 1993; Clinton and Jenkins-Moore, 1994; Ornduff et al., 1994, 1996, 1997, 1999) and research for finding Rorschach indicators of sexual abuse for differential diagnosis (Sanders, 1991; Kamphuis et al., 2000; Leavitt, 2000). Though Leavitt derived 8 indicators of sexual abuse only from the content of Rorschach responses (Leavitt, 2000), Kikuchi et al. derived 4 indicators from the content, determinant and location of Rorschach responses comparing 14 sexually abused females with 14 non-abused females and 14 non-abused males as in the following: i) a host of aggression and hostile content, for example, a person who has been stabbed with a knife, a person who has been crushed to death, a person whose body has been pulled apart with blood being scattered and dripping from the internal organs, and so on; ii) a loss of control in color responses, for example number of form-color response (FC) equal to or lower than the total of color-form response (CF) and pure color response (C) ( $FC \leq CF + C$ ); iii) particular responses on certain locations where one could see the female sexual organ; and iv) fewer shading responses, especially form-texture response (Fc) (Kikuchi et al., 2001, 2002). In the present study, we examined larger numbers of Rorschach records of sexually abused females by the statistical method. Comparing Rorschach records of abused females with those of non-abused females we investigated not only the propriety of our four indicators but also more precise Rorschach indicators of sexual abuse.

## Subjects and Methods

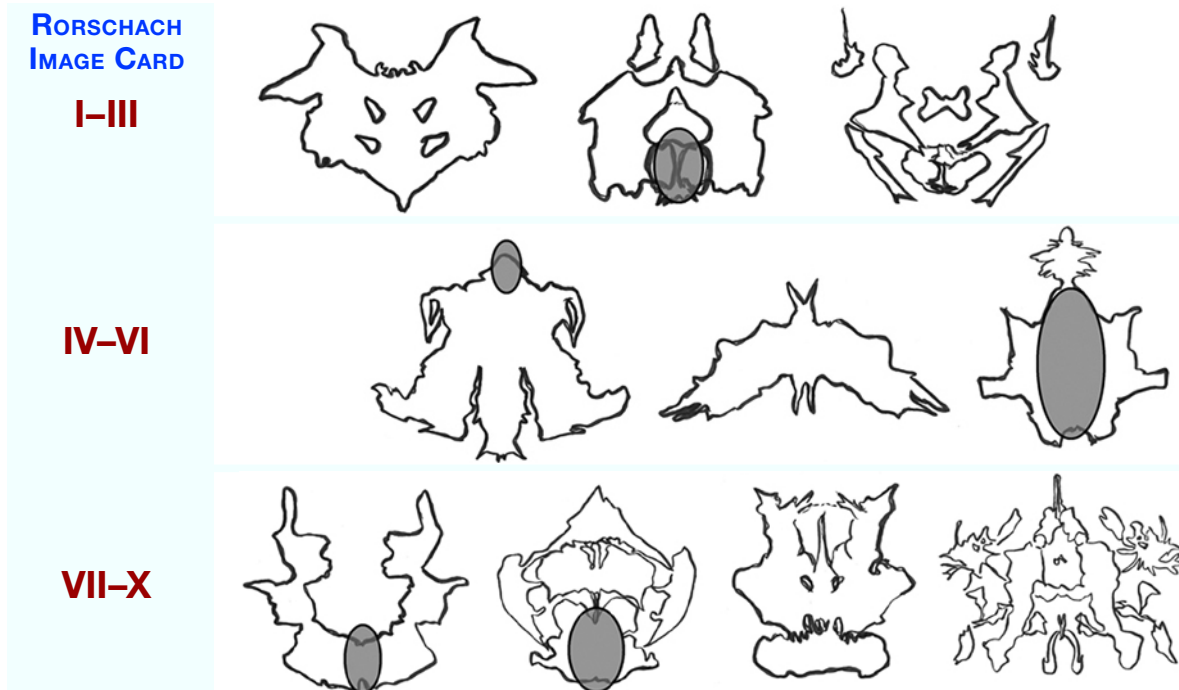
### Patients

The subjects were 156 Japanese female psychiatric outpatients and inpatients at Nozoe Hospital, Kurume City, Japan. One hundred and eight had a history of sexual abuse (abused group) and 48 had no history (non-abused control group), and who had been administered the Rorschach test as a part of a standard psychological test battery ordered for evaluative purposes. Russell categorized the seri-



**Fig. 1.** Seriousness of sexual abuse for the 108 patients of the sexually abused group we categorized into the very serious, serious and least serious subgroups according to Russell's classification (1984). [ ], number of patients.

ousness of sexual abuse into the following 3 groups (Russell, 1984): i) Very Serious Sexual Abuse, including experiences ranging from forced penile-vaginal penetration to nonforceful attempted fellatio, cunnilingus, anilingus and anal intercourse; ii) Serious Sexual Abuse, including experiences ranging from forced digital penetration of the vagina to non-forceful attempted breast contact (unclothed) or simulated intercourse; and iii) Least Serious Sexual Abuse, including experiences ranging from forced kissing, intentional sexual touching of the respondent's buttocks, thigh, leg or other body part, including contact with clothed breasts or genitals, to attempts at any of the same acts without the use of force. In the analysis with Russell's classification, the abused group consisted of 78 very serious, 22 serious and 8 least serious patients (Fig. 1). The International Statistical Classification of Diseases and Related Health Problems 10th Revision (ICD-10) (World Health Organization, 2007) given by the psychiatrists in charge for the abused group revealed 6.5% as schizophrenia, schizotypal and delusional disorders (F2), 15.7% as mood (affective) disorder (F3), 49.1% as neurotic, stress-related and somatoform disorder (F4), 8.3% as behavioral syndromes associated with physiological disturbances and physical factors (F5), 15.7% as disorders of adult personality and behaviour (F6) and 4.9% as behavioral and emotional disorders with onset usually occurring in childhood and adolescence (F9).



**Fig. 2.** Sex locations (●). We identified the sex locations as the areas where one could see the female sexual organ.

The classification for the control group proved 6.3% as F2, 31.3% as F3, 35.4% as F4, 4.2% as F5 and 22.9% as F6. ICD-based scatter analysis proved no significant differences between the 2 groups. Subject age ranged from 14 to 56 years with a mean of  $27.9 \pm 9.4$  for the abused group, and from 15 to 51 years with a mean of  $29.1 \pm 8.1$  for the control group. Age-based Student's *t*-test showed no significant differences between the 2 groups.

### Scoring system

All Rorschach images in the present study were administrated and scored by the first author using Klopfer's system. The degree of aggression and hostile content was scored by Mürstein's Rorschach hostility scale (Mürstein, 1956). We identified the sex locations (Fig. 2) as the areas where one could see the female sexual organ: the lower middle red of Card II; the upper middle rare detail response (dr) on Card IV; the lower middle dr on Card VII (Rapaport et al., 1968); the lower middle dr on Card VI (Klopfer and Kelley, 1942) and the lower

**Table 1. Samples of m and m tendency responses for sex locations\***

| Card | Response   |
|------|--|
| II   | Someone who has been crushed to death.<br>Water flowing into a lake.<br>Copulation.<br>A heart is beating fast.<br>Something is torn and blood has been scattered around.  |
| IV   | Rape is being attempted.   |
| VI   | A talisman is glued to a door so that it can't be opened.<br>A pinwheel is turning round and round.<br>A door seems to be open.<br>Menstrual blood is flowing.   |
| VII  | An intense fire is blazing up.<br>Both feet are bound.<br>A rabbit's is twitching its nose convulsively.<br>The center point of a revolving pinwheel.<br>The water in the lake is flowing out.<br>A tornado bounds up from here. |
| VIII | Lips are mumbling something.<br>It is crowded here.  |

m, inanimate movement response.

\* We identified sex locations as areas where one could see the female sexual organ (Fig. 2).

**Table 2. Rorschach scores†**

|  | Control group [48] | Sexually abused group [108] |
|--|--------------------|-----------------------------|
| RHS‡   | 12.38 ± 8.57       | 19.90 ± 15.96***            |
| Response   | 23.92 ± 11.32      | 23.31 ± 12.36               |
| Percentage of form response out of all responses | 47.67 ± 17.12      | 50.18 ± 49.70               |
| Human movement response                          | 3.66 ± 2.26        | 3.82 ± 3.05                 |
| Animal movement response                         | 2.43 ± 1.69        | 2.14 ± 2.10                 |
| Inanimate movement response                      | 1.02 ± 1.12        | 1.44 ± 1.69                 |
| Form-texture response                            | 0.64 ± 0.87        | 0.44 ± 0.71                 |
| Percentage of shading response in all response   | 4.48 ± 5.65        | 3.91 ± 4.71                 |
| Form-color response (FC)                         | 1.66 ± 1.68        | 0.9 ± 1.32**                |
| Color-form response (CF)                         | 2.04 ± 1.96        | 2.74 ± 2.06*                |
| Pure color response (C)                          | 0.15 ± 0.46        | 0.19 ± 0.58                 |
| ΣC§  | 2.62 ± 2.17        | 3.13 ± 2.30                 |
| Achromatic response                              | 1.20 ± 1.00        | 1.47 ± 1.26                 |
| Percentage of animal response in all response    | 42.58 ± 11.99      | 38.09 ± 14.85               |
| Percentage of human response in all response     | 34.24 ± 55.38      | 28.28 ± 14.11               |

Shown are mean ± SD.

[ ], number of patients.

\*  $P < 0.05$ ; \*\* $P < 0.005$ ; \*\*\* $P < 0.001$ .

† Rorschach protocols were scored using Klopfer's system.

‡ Mürstein's Rorschach hostility scale (RHS) was used to score the degree of aggression and hostile content.

§  $\Sigma C = \frac{FC + (2 \times CF) + (3 \times C)}{2}$

middle dr on Card VIII (Kikuchi et al., 2001). We also took notice of inanimate movement response (m) or m tendency, which is interpreted as evidence of fear and tension, for the sex locations (Table 1) and the sex responses for the sex locations given by flashbacks from patients' past trauma.

### Statistical analysis

All values were expressed as mean ± SD. Statistic probabilities were calculated with Student's *t*-test between the Rorschach responses of the 2 groups. Also the statistical method was used to compare the differences in the ratio of patients who showed a tendency toward  $FC \leq CF + C$  and the ratio of patients who gave m, m tendency or a sex responses for any sex location. A *P* value of less than 0.05 was considered significant.

### Results

As shown in Tables 2 and 3, the mean for the Rorschach hostility scale for the abused group was  $19.99 \pm 15.96$  and  $12.37 \pm 8.57$  for the control

group.  $FC \leq CF + C$  was shown in 95 of the 108 (88%) abused and 30 of the 48 (63%) non-abused. Eighty-two of the 108 (76%) abused and 1 of the 48 (2%) non-abused gave the sex responses, m or m tendency for the sex locations. The differences in these 3 items were considered remarkably significant ( $P < 0.001$ ).

For FC and CF in the  $FC \leq CF + C$  equation, there were very significant ( $P < 0.005$ ) or significant differences ( $P < 0.05$ ). However, other items including the percentage of shading responses in all response (shading %) and FC showed no significant differences.

### Discussion

In the present study, it becomes obvious that the following 3 indicators are valid for finding sexual abuse histories for differential diagnosis: i) a host of aggression and hostile content; ii) loss of control in color responses, for example  $FC \leq CF + C$ ; iii) the sex responses, m or m tendency for the sex locations (Note: In our previous study in 2001, we expressed this as particular responses on locations

**Table 3. Number of patients who gave  $FC \leq CF + C$  and m, m tendency† or a sex response for sex locations**

|                                | Control group [48] | Sexually abused group [108] | <i>P</i> |
|--------------------------------|--------------------|-----------------------------|----------|
| Responses on the sex locations | 1 ( 2%)            | 82 (76%)                    | 0.001    |
| $FC \leq CF + C$               | 30 (63%)           | 95 (88%)                    | 0.001    |

C, pure color response; CF, color-form response; FC, form-color response;  $FC \leq CF + C$ , number of FC equal to or lower than the total of CF and C; m, inanimate movement response.

[ ], number of patients.

† We identified sex locations as areas where one could see the female sexual organ (Fig. 2). We took notice of m or m tendency for the sex locations and sex responses for sex locations given by the flashback of their past trauma.

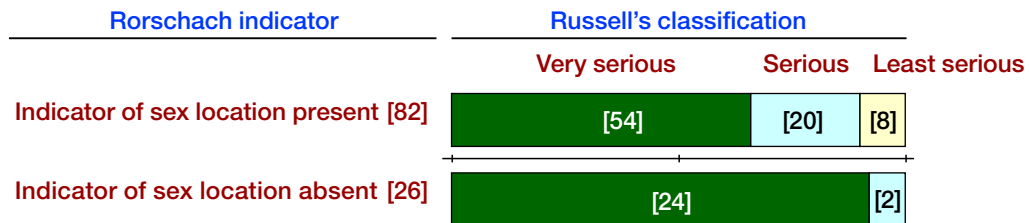
where one could see the female sexual organ). Though the simple means of shading % and FC for the abused group were lower than those for the control group, there were no statistically significant differences. To exhibit more precise Rorschach indicators of sexual abuse, we omitted the 4th indicator, fewer shading responses, especially FC.

Since subjects of both groups were female psychiatric patients, these indicators become most useful in discriminating sexual abuse from other problems in psychiatric settings. As Takahashi and Kitamura reported, psychiatric patients showed higher levels of  $FC \leq CF + C$  than normal persons (Takahashi and Kitamura, 1981), so our indicators of sexual abuse may be useful also in other counseling or consultation centers.

The above 3 are useful indicators provided they are fortified with statistical analysis. However, aggression and hostile contents were given not only by sexually abused patients. Frieswyk and Colson reported that borderline personality disorder patients frequently gave aggressive responses on the Rorschach test (Frieswyk and Colson, 1980), while van der Kolk and Ducey reported that Vietnam

combat veterans with Post Traumatic Stress Disorder had higher frequencies of blood and anatomy responses (van der Kolk and Ducey, 1989). Ames et al. also reported that aged people with dementia gave many sex and anatomy responses (Ames et al., 1954). Likewise concerning  $FC \leq CF + C$ , people with bipolar affective disorder (Okabe, 1972) and borderline personality disorder (Athey et al., 1980) showed this tendency.

The Rorschach sex location is an original concept of ours and, as a result, we were able to find the 3rd indicator. Though Saunders examined the sex response of sexually abused and non-abused patients, she could find no statistically significant differences (Saunders, 1991). For sex responses, the indicator, m or m tendency for the sex locations, is definitely useful because it was shown by only 2% of the non-abused group. We can say that almost all patients who give this indicator have history of sexual abuse; however, all sexually abused patients do not show this indicator. Twenty-four percent of the abused did not give this indicator at all in the present study. This may suggest that there are some subgroups in the abused group. The



**Fig.3.** Seriousness of sexual abuse analyzed with Russell's classification (Russell, 1984) for 82 patients who gave an indicator of the sex location and 26 who gave no indicator. [ ], number of patients.

ICD-10 for patients who gave this indicator showed 6.1% as F2, 15.9% as F3, 46.4% as F4, 9.8% as F5, 18.3% as F6 and 3.7% as F9. The ICD-10 for those who did not give it showed 7.7% as F2, 15.4% as F3, 57.7% as F4, 3.8% as F5, 7.7% as F6 and 7.7% as F9. ICD-10-based scatter analysis proved no significant differences between the 2 groups. However, we observed that the patients who did not show this indicator had more serious history of abuse (Fig. 3). Further investigation is needed to find factors of sexually abused females who do not give this indicator. Combining the 3 indicators is a more useful tool than using only one indicator, because every indicator is not perfect and should be supported by as many parameters as possible.

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