

Response to Rorschach test in autism spectrum disorders in adulthood: a pilot study

R. Keller¹, S. Bari¹, B. Fratianni²,
A. Piedimonte¹, F. Freilone²

¹ Autism Adult Center, Local Health Unit ASL Città di Torino, Turin, Italy; ² Psychology Department, University of Turin

Summary

Objective

Patients with Autism Spectrum Disorders (APA – DSM5) presenting an higher functioning level are often hardly recognized during childhood and it is not infrequent for the first diagnosis to be made during adolescence/adulthood. Thus, it is highly probable for the first psychological and psychiatric evaluation of adolescents and adults affected by level 1 ASD (in particular what was defined in the DSM IV TR as Asperger syndrome) to happen in non-specialized centers due to comorbidities (e.g. anxiety, depression) and not due to the actual disorder. The focus of this pilot study was to use the Rorschach test to explore the response modality and the eventual variation in the test administration in ASD. This study highlights the potential efficacy of the Rorschach inkblot test in ASD.

Method

Forty patients (age = 30 ± standard deviation). All patients responded to DSM-5 criteria used to define the high functioning Level 1 ASD. Patients present spontaneously at the clinic (Autism Adult Center – Local Health Unit ASL To2) or conducted by their families to receive a clinical psychological-psychiatric evaluation. The method used to score the test followed the method of the French School.

Results

From a relationship point of view, all patients approached the test with a collaborative attitude and they often manifested an open interest for the diagnostic material. The Rorschach administration was conducted without any irregularity. 45% of the patients gave more than 20 answers, 65% of the patients gave a number of Detail answers inferior to the normative range, 65% of the test presented a number of human content in the normative range. In 52% of the patients, the index intimate resonance (T.R.I.) index was extratensive.

Conclusions

Rorschach test is useful with ASD patients because it doesn't present classic problems that they usually encounter in other test, like: the tendency to interpret verbal items or written questions in a literal way; the difficulty in answering questions that are not directly related to them; the difficulty of focusing their attention on the test; the length of the test. The Rorschach test could be one of the most useful diagnostic tools to explore personality traits, eventual psychopathologic problems and the psychological functioning of the ASD patients.

Key words

Autism Spectrum Disorders • Rorschach Test • Adulthood

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Introduction

Patients with Autism Spectrum Disorders (ASD) ¹ presenting an higher functioning level are often hardly recognized during childhood and it is not infrequent for the first diagnosis to be made during adolescence/adulthood ^{2,3}.

Correspondence

Keller Roberto
Autism Adult Center, Local Health Unit ASL
To2, Corso Francia 73, 10138 Turin
• Tel. +39 011 4336129
• E-mail: roberto.keller@ascittaditorino.it

Indeed, patients' unawareness of the disorder lasts until its communication through the diagnosis and causes an inadequate social impact and reactive comorbidities like anxiety, depression, substance abuse (in particular alcohol) and even psychosis⁴⁻⁸.

Thus, it is highly probable for the first psychological and psychiatric evaluation of adolescents and adults affected by level 1 ASD (in particular what was defined in the DSM IV TR as Asperger syndrome) to happen in non-specialized centers due to comorbidities (e.g. anxiety, depression) and not due to the actual disorder.

Still, classical diagnostic tools used in clinical psychology have not been thoroughly studied in the ASD population. The lack of these studies can cause the possible misinterpretation of the psychological test results due to the particular modality, typical of the autistic mind, of examining reality that presents: coherence deficits deriving from mirror neurons and executive functions deficits, hyper-attention to details, literal reading of the situations⁹⁻¹².

It is also fundamental for the personnel who works with ASD patients to ascertain the presence of psychopathological aspects associated with autism, knowing however the specific use and response modality of the test. Furthermore, even though the DSM-5 defines the ASD evaluation as a general diagnostic category, it is necessary to investigate the structural psychological functioning to have a complete evaluation of the single patient.

To this end, the focus of this pilot study was to use the Rorschach test to explore the response modality and the eventual variation in the test administration in the ASD population afferent to the Regional Center for Autism Spectrum Disorders (RCA). The Rorschach test¹³ is a structural investigation instrument, used to understand patients' personality, that describes the patient's way of being, in relation to external as well as internal solicitations, creating a description that can be considered a condensation, a synthesis, a summary of the patient's way to approach the world¹⁴. The Rorschach test has been defined by Nina Rush de Traubenberg a "relational space" where it is possible to realize a fundamental human tendency: the self-representation¹⁵.

The Rorschach test is a projective test composed of 10 tables: starting from a deliberately ambiguous and undefined stimulus (the inkblots), the subject has the possibility to express parts of himself, his own ways of perceiving, his cognitive-affective tendencies and some aspects of the own personality. Inkblots are likely to work as a stimulus because they are relatively ambiguous or poorly structured; therefore they allow a great variety of possible answers.

Materials and methods

Participants

Forty patients (age = 30 ± 10 standard deviation) have been recruited for this study.

Patients present spontaneously at the clinic (Autism Adult Center – Local Health Unit ASL To2) or referred by their families to receive a clinical psychological-psychiatric evaluation. The Informed consent was signed by the patients themselves during the first meeting at the clinic. The Rorschach test has been administrated by a psychologist at the Autism Adult Center.

All patients responded to DSM-5 criteria used to define the high functioning Level 1 ASD. Level 1 of DSM 5¹, "Requiring support", It includes subjects who, without supports in place, have deficits in social communication that cause noticeable impairments. Difficulty initiating social interactions, and clear examples of atypical or unsuccessful response to social overtures of others. May appear to have decreased interest in social interactions. For example, a person who is able to speak in full sentences and engages in communication but whose to- and-fro conversation with others fails, and whose attempts to make friends are odd and typically unsuccessful. Rituals and repetitive behaviors (RRB's) cause significant interference with functioning in one or more contexts. Resists attempts by others to interrupt RRB's or to be redirected from fixated interest. Inflexibility of behavior causes significant interference with functioning in one or more contexts. Difficulty switching between activities. Problems of organization and planning hamper independence.

Level 1 ASD diagnosis has been confirmed by a QIT score > 70 evaluated with the WAIS-R test¹⁶ and by the administration of the following test: ADI-r¹⁷, ADOS¹⁸ and RAADS¹⁹. For a clearer description of evaluation protocol for the minimal diagnosis of ASD patients (with supposed low necessity for support – Level 1, DSM-5) (Tab. I).

Only male patients were included in this pilot study to have a more homogenous sample, since there is an elevated prevalence of male patients, in respect to females, in the Level 1 ASD²⁰.

38 patients graduated from high school and 2 from university. 39 patients were, at the time of the study, unemployed and only 1 had a stable occupation. All patients received an informed consent form.

Test administration

The Rorschach inkblot test have been administered to all patients. Before administering the test to the patients of the sample, a pre-test phase where the inkblot test was administered to other ASD patients was performed in order to rule out possible difficulties in the administration.

The method used to score the test followed the method of the French School^{15,21}, applying the normative scores

TABLE I. Evaluation protocol for the minimal diagnosis of ASD patients (with supposed low necessity for support – Level 1, DSM-5).

Clinical meetings with the patient (i.e. one meeting to know the patient + two meetings to have an in-depth clinical overview of the patient)
Anamnestic data collection from the family, in particular data relative to the first years after birth
Evaluation with ADI-r with the parents
Evaluation with specific test related to ASD (ADOS-RAADS)
Evaluation with the Rorschach inkblot test

of the Italian sample from Passi Tognazzo (medium and normative values of Rorschach indexes in an Italian sample of 736 subjects between 18 and 65 years ²²).

Results

Of the 40 administered test, 36 were considered valid (because the total number of answer given by patients was > 18). 45% of the patients gave more than 20 answers (i.e. the average number answers in the Italian sample).

From a relationship point of view, all patients approached the test with a collaborative attitude and they often manifested an open interest for the diagnostic material. The Rorschach administration was conducted without any irregularity, following the usual practice, without changing in any way the directions ²².

In respect to the *locations* (that indicate where, in the card, each subject perceived what he interpreted and represent how each subject approaches reality and how they organize their thought), 65% of the patients gave a number of Detail answers inferior to the normative range, associated to an high tendency (85%) to give Global answers, thus they manifest the tendency to orient themselves toward an abstract and synthetic kind of thought, not always denoted by good quality.

In all the valid test did not appear a significant number of DbI (white detail), Do (rarely isolated detail) and Dd (small detail) answers that could lead to the so-called interior insecurity syndrome.

Analyzing the *determinants* (that indicate what, in the card, structured patients' perceptions into answers), it is possible to observe that 77% of the protocols presents a percentage of responses from the shape determinate that could be considered in the normative range or slightly above and it indicates a discrete formal reasoning skill, control over the situations and ability to adapt to them in an organized way. This result indicates that ASD patients try to rationalize experiences, thus they try to use reasoning in their experiences but this attempt does not always end well. Indeed, 62% of the patients present a formal quality inferior to the normative range and, thus, show a superficiality in the approach toward

situations, a reduced efficacy of their reasoning skill, an inefficient critic skill and a judgment skill that sometimes tends to decrease. A lack of formal quality can also indicate a poor quality of thought and the presence of pathological aspects that interfere with the intellectual functioning.

Fifty percent of the patients gave an adequate number of kinesthetic human answers, an important aspect because the determinant kinesthetic represents internal creative skills, dynamism, reflexive and introspective skills as well as affective stability. The presence of this determinant implies an identification mechanism and it is interesting to note that, from a qualitative point of view, actions perceived by patients tended to be socially acceptable and positively connoted. 25% of the protocols presented, however animal and object kinesthetic answers: a tendency that is related to a minor integration, less adaptation to concrete reality, less realization skill and thus a reduction or non-evolution of the individual realization skill (De Traubenberg, 1999). Animal's kinesthetic answers determinants are related to a childhood affective predisposition toward egocentrism and instinctive nature that does not take into account the context's demands and adaptation necessities. Object's kinesthetic answers determinants, instead, represent an high and very profound affective power, that, however, does not reach a socialized way to express itself. These two aspects are coherent with the difficulties encountered by these patients during their everyday life.

To the colored inkblots, that represent an index on how patients answer to external emotional *stimuli* and measure the affective adaptation, 42% of the patients answered with more certain responses mainly from the color, in respect to responses certain mainly from the form, a relationship that is not proper of an equilibrated affectivity. Color's answers are in fact an index of a scarcely controlled affectivity where the emotion is unstable, less integrated and relations with other persons are inconstant and empathy is scarce. These answers, present in 35% of the patients, are expression of an affectivity where impulsiveness predominates and where intense emotions are present but not controlled. How-

ever, it is worth noticing that another 65% of patients presented an adequate number of color answers, representing evolved relational skills but also adequate affective adaptation and the ability to control emotions. This last result is an index of a good affective resonance and represents the ability in Level 1 ASD patients to get in contact with other people and understand their needs and interests.

In 52% of the patients, the index intimate resonance (T.R.I.) index was *extratensive*. This result, usually, is related to a possible suggestibility and egocentrism on a background composed by lability and hyper-affectivity that could translate into high impulsivity and is also associated to a low number of kinesthetic answers¹⁵.

Sixty five percent of the test presented a number of responses with human content in the normative range or higher than the norm. Answers of this kind (human) are index of socialization, interest in the others and ability to identify and differentiate one own self.

It is important to note that in every protocol considered in the study, there is at least one human answer, even though in 63% of the cases the majority of these answers were composed by de-realized human unreal answers and partial answers. These data indicates the possibility, in these patients, of a desire to socialize and to be in contact with others that, in many cases, remains partial or just fantasized, leaving ASD patients with feelings of anxiety, difficulty and inhibition during their relationships. Interpersonal relationships, thus, can be imagined instead of realized and can be constructed by patients' own criteria or just idealized. Since the peculiarity of the human content in the Rorschach protocol and its tight relation with relationships and identity, it is still surprising that ASD patients produced human answers in their protocols, even though with characteristics linked to their pathology.

In the analyzed protocols there are numerous contents related to nature and in particular answers where the content is an object. In 70% of the protocols, this last content prevails on human contents and in 40% of the protocols, there is an higher number of this content in comparison to human and animals contents. This category (object) indicates a low index of representation and can contain regressive connotations or signals a stressful situation, hard to manage at a conceptual level. In the protocols with higher psychotic characteristics, there are also anatomical, sexual and blood related answers that, however, do not reach a significant number. 27% of the protocols presents a number of answers with animal content in the normative range. This content indicate the thought's automatisms and mental processes present in the ASD patients, thus they indicate an adaptive and socializing factor. In another 42% of the protocols, however, the number of animal contents is

higher than the normative range and indicates stereotypical and poor thought, conformism and rigidity. In the remaining 31% under the normative range, it is possible to observe in the patients a difficulty in sharing schemes and automatisms.

Forty-seven percent of the patients gave an adequate number of banal contents, indicating the ability to give shared interpretations in a social context and represent an ability to intellectually adapt and a good understanding of the collectivity. In the V inkblot, the banal content has been described by all patients (The banality of a response refers to its statistically high frequency. An answer is "banal" when it is given by at least 1 in 6, 17%. Each school brings its list of banal responses because some platitudes are constant in every cultures in every age and reach frequencies between 70% and 90%, others vary depending on the geographic area, the type of culture, and of the historic moment or age of the persons examined. Medium and normative values of Rorschach indexes in an Italian sample of 736 subjects between 18 and 65 years²².

Discussion

From the data collected in this pilot study, it is possible to observe that Level 1 ASD patients (DSM -5¹) are able to stay in a relational space created during the test and they are capable, during the test, of projecting parts of themselves and their internal world. From the Rorschach test's administration it can be observed the test validity even with these patients: indeed, the number of answers is in the normative range, furthermore the test have been completed in an adequate time and received good feedbacks from the patients.

Comparing the data obtained in every single protocol with the data obtained during the clinical sessions it was possible to observe how the test is capable to delineate certain personality traits of the ASD patients with extraordinary precision and could shed light on the possible comorbidities or problematic areas of the single patient. It is, thus, possible to observe how each protocol is different from the others, reflecting the specific patients' characteristics. Not every protocol presents the same problems: where social adaptation is optimal and there is no comorbidity, the test indicates, as for the neurotypic patients, adaptive personality traits. In other cases, the test has proved to be useful to underline psychotic nuclei or the presence of pathological anxiety or depression: fundamental aspects to set up a specific treatment^{23 24}.

From the analysis of the different protocols it is possible to find data correlated with ASD specific characteristics, but also data strictly linked to the individual characteristics of the single patient (e.g. the presence of anxiety, anguish, depression).

Particular attention needs to be paid on the card number III, usually defined as the relational card, where the spatial disposition of the human figures (that in this card are prominent) indicates the need of representing one own self in respect to the other and also the kind of relationship sought by the patient. Given the known relationship difficulties of ASD patients, it was expected, in this patients, the impossibility to perceive the human figure and thus the impossibility to interpret the card number III. However, in this card, 43% of the patients could still perceive human figures and these figures were described as relating with each other. In the same card, 64% of the ASD participants individuated a human even though some of them formulated an unreal human answer or partial. Finally, 36% of the ASD patients did not give an answer with human content in in the first attempt, but during the *enquiry phase* only two participants failed while testing the limits. This result highlights the ASD patients' ability to represent humans in the test, with all the difficulties characterizing their pathology, and also to represent themselves and the others even though with a still problematic or partial contact modality.

Within the *particular phenomena* observed in the sample, it is important to note the lack of interpretative awareness, the perseverations and the devitalizations. Awareness of the interpretative attitude is weak in some patients and it manifests with verbalizations where patients tell to the psychologist that the inkblot is showing "exactly" the expressed content (e.g. "this is really the sacral bone!", "... but those are bones!").

In the protocols, different perseverations have been observed. These phenomena are usually associated to repetitions of what's being called "patients' expertise islands" but in some cases they have been related to repetition of the same content (e.g. butterfly, flying animals, humans).

In some protocols, ASD patients reported also confabulations and contaminations, phenomena related to the psychotic functioning, and devitalizations (present in 50% of the protocols), more related to a depressive dimension. Mutilations have been perceived only in two patients and no choc phenomenon, an highly nevrotic element, has been observed.

Conclusions

This pilot study, that needs to amplify the sample to achieve normative data on ASD patients, highlights the potential efficacy of the Rorschach inkblot test used within the standard protocols for the diagnosis of autism. Furthermore, different aspects of the test are suitable for ASD patients:

- fast administration (one hour maximum);
- atmosphere free of judgments;
- simplicity of the indications given to ASD patients;
- easy to execute: there are no specific comprehension and problem solving issues or multiple choice answers involved;
- the Rorschach test, thanks to its less-structured *stimuli* (i.e. inkblots) permits to investigate how these patients perceive reality without posing specific questions;
- projections mechanisms permit to evade communication's obstacles and thus, in this sense, the Rorschach test could be one of the most useful diagnostic tools to explore personality traits, eventual psychopathologic problems and the psychological functioning of the ASD patients.

Rorschach test is useful with ASD patients because it doesn't present classic problems that they usually encounter in other test, like:

- the tendency to interpret verbal items or written questions in a literal way;
- the difficulty in answering questions that are not directly related to them;
- the difficulty of focusing their attention on the test;
- the length of the test.

Within this population, thus, the use of the Rorschach test could be important to better understand the patient and investigate his personality traits or a possible associated psychopathology. Furthermore, knowing how ASD patients approach the test is useful to avoid mistakes during diagnosis, specifically if the diagnosis is being made by non-experts in the field of autism.

Conflict of Interest

The authors are no conflict of interests.

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