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Personality characteristics of multiple sclerosis patients: A Rorschach investigation

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ABSTRACT

Objective: There are many studies examining cognitive deficits in patients with multiple sclerosis (MS), while significantly less attention has been given to emotional and personality changes. A chronic neurological disorder brings many life stresses and affects the patient's ability to cope with them. This study explored the personality characteristics in a sample of MS patients.
Methods: 51 MS patients (13 male and 38 female, mean age: 42.6 years, mean EDSS: 3.2). All participants were administered the Rorschach Test coded by the Comprehensive System.
Results: Our findings show that the patients in our sample perceive themselves as being less competent than others, at some cost to their self-esteem. A large percentage relies on an avoidant style of coping with problems.
Conclusion: These findings imply that MS patients might have special needs in terms of communication with healthcare providers, decision making and adherence to their treatment plans because of their simplifying style of information processing. We argue that it is important to consider personality as well as cognitive changes in neurological disorders such as MS.

1. Introduction

Research in the psychological aspects of neurological illnesses has traditionally focused on cognitive and neuropsychiatric changes, while the area of personality has been much less studied. When we address personality we refer to individual traits and not to psychiatric symptoms. Personality consists of stable internal factors that make the behavior of a person consistent over time and different from the behavior of others [1]. Mood or emotional states may change dramatically over time, but personality does not. The Five Factor Model (FFM) is widely accepted as a comprehensive description of the basic personality structure [2]. According to this model, the variance in personality traits is best explained by five major personality dimensions: Extraversion, Agreeableness, Conscientiousness, Neuroticism, and Openness to Experience. Extraversion describes an outgoing, sensation-seeking style. Agreeableness is a dimension associated with social cooperation, honesty, altruism and cooperativeness. Conscientiousness is characterized by achievement orientation, intentionality, tidiness and responsibility. Neuroticism is a dimension on which an individual can have a higher or lower tendency to negative emotions, and can be therefore described as either calm, composed or the opposite. Finally Openness to Experience is characterized by a wish for new knowledge and experiences in individuals who are curious, creative, and imaginative. The FFM was originally identified through analyses of trait terms derived from the English language dictionaries – a process called the lexical approach to personality structure [3]. It adopts the hypothesis that all important traits will have been encoded in natural language as personality traits are central to human interactions. The model has been supported by numerous factor analyses. Theories and research suggested that it may be important in understanding of the personality–health relationship with each of the five-factors impacting on health status [4].

Multiple sclerosis (MS) is an inflammatory demyelinating disease of the central nervous system. Neuropathological changes during the disease are not restricted to cerebral white matter alone. There is growing evidence that irreversible tissue damage includes axonal and neuronal loss in both white and gray matter [5]. Multiple active lesions also arise within or adjacent to the cortex [6], a finding that has significant implications for personality research. Strong correlations have been found between measures of cognitive dysfunction in MS and brain atrophy [7–9]. Recent studies found evidence for selective hippocampal atrophy in MS that is associated with memory deficits [10]. Furthermore a relationship has been

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found between cognitive impairment and psychiatric changes such as apathy and depression in patients with MS [11]. However there have been only a few studies examining personality in patients with MS and those mainly focused on the Five Factor Model. Benedict et al. [12] found elevated maladjustment (Neuroticism) and a reduction in empathy, agreeableness, and conscientiousness in 34 patients with MS. Taking the cognitive factors into account, they found that executive control predicted the presence of these personality abnormalities, suggesting a type of frontal lobe syndrome. A Russian PET scan study on 34 MS patients explored the relationship to personality problems assessed by a modified self-report test method (MMPI, SMPT method) [13]. Results showed that patients with more pronounced personality difficulties had a relative decrease in glucose metabolic rate in the frontal and parietal cortex, with relative increases in the structures of the limbic system. Trying to examine the possible neuroanatomical correlates of personality changes, a study looked at measures of cortical atrophy in MS patients and found that it has a negative impact on their personality [14]. They showed that the reduction of Extraversion, Openness and Conscientiousness found in MS patients significantly correlated with a reduced cerebral cortex volume. This research shows the importance of a broader approach to the psychological aspects of neurological illness including the area of personality. Our study focused on describing variables of personality in patients with MS using an alternative method of assessment – The Rorschach Test.

2. Methods

2.1. Participants

We included a series of protocols of 51 patients with MS diagnosed according to McDonald's diagnostic criteria for multiple sclerosis [15] consecutively referred by neurologists for a standard psychological assessment to the MS Centre at University Medical Centre Ljubljana. The patients were therefore not randomly selected. 38 patients were female and 13 were male. 37 patients were diagnosed with relapsing remitting MS, 13 with secondary progressive and one with primary progressive. Mean age of the patients was 42.6 years (SD = 9.5) and their mean EDSS was 3.2 (SD = 1.8). The mean duration of illness was 7.9 years (SD = 6.71).

2.2. Instrument

All patients were tested with the Rorschach Test. The Rorschach consists of 10 inkblots which are administered in a standardized way. For the respondent they present a sequence of problem-solving decisions that provide objective assessment of cognitive structuring style. On the other hand it constitutes in part a stimulus to fantasy that provides subjective assessment of thematic imagery. It therefore measures both perceptual and associational processes as well as assesses both structural (a way of identifying states and traits) and dynamic (revealing a person's underlying needs, attitudes, conflicts, and concerns) aspects of personality functioning [16].

The Rorschach Test was devised by a Swiss psychiatrist Herman Rorschach (1884–1922) and was further developed after his death [17]. Only evidence-based variables were selected by Exner to create the comprehensive system [18]. A summary of scientific evidence published by the Board of Trustees of the Society for Personality Assessment states that the Rorschach possesses reliability and validity similar to that of other generally accepted personality assessment instruments [19]. The Rorschach is widely used internationally. A recent monograph [20] presented Rorschach reference samples from 16 countries representing Australia, Asia, Europe, the Middle East, and North and South America.

All tests were administered and coded by the same psychologist. The frequencies and percentages of different variables scored by the Rorschach Comprehensive system were calculated.

Table 1
The frequencies and percentages of different variables scored by the Rorschach comprehensive system describing coping styles, control and stress tolerance, affective features, self perception, interpersonal perception and ideation; for further explanation, see [18,20].

Variable	Frequency	Percent	Variable	Frequency	Percent
Male	12	24%	*X*-% > .15	16	31%
Female	38	75%	*X*-% > .20	10	20%
Introversive	4	8%	*X*-% > .30	1	2%
Pervasive Intro	2	4%	*R* > 27	2	4%
Ambitent	9	18%	DQv > 2	7	14%
Extratensive	2	4%	*S* > 2	5	10%
Pervasive extra	2	4%	Sum *T* = 0	47	92%
Avoidant	36	71%	Sum *T* > 1	0	0%
D-Score > 0	13	25%	3*r* + (2)/*R* < 0.33	36	71%
D-Score = 0	34	67%	3*r* + (2)/*R* > 0.44	7	14%
D-Score < 0	4	8%	*Fr* + *rF* > 0	11	22%
D-Score < −1	0	0%	Pure *C* > 0	12	24%
Adj *D* > 0	14	27%	Pure *C* > 1	4	8%
Adj *D* = 0	35	69%	Afr < 0.40	18	35%
Adj *D* < 0	2	4%	Afr < 0.50	31	61%
Adj *D* < −1	0	0%	FM + *m* < sum shading	13	25%
Zd > +3.0 (overincorp)	6	12%	(2AB + Art + Ay) > 5	0	0%
Zd < −3.0 (underincorp)	12	24%	Populars < 4	11	22%
FC > (CF + *C*) + 2	4	8%	Populars > 7	4	8%
FC > (CF + *C*) + 1	11	22%	COP = 0	28	55%
(CF + *C*) > FC + 1	5	10%	COP > 2	0	0%
(CF + *C*) > FC + 2	3	6%	AG = 0	42	82%
CDI = 5	6	12%	AG > 2	0	0%
CDI = 4	28	55%	MOR > 2	3	6%
XA% > .89	23	45%	Level 2 Sp.Sc. > 0	14	27%
XA% < .70	4	8%	GHR > PHR	37	73%
WDA% < .85	17	33%	Pure *H* < 2	29	57%
WDA% < .75	5	10%	Pure *H* = 0	6	12%
X + % < .55	12	24%	*p* > *a* + 1	2	4%
Xu% > .20	23	45%	*Mp* > *Ma*	10	20%