PSICO
v. 40, n. 3, pp. 279-286, jul./set. 2009

Gender Differences in Schizophrenia through Rorschach technique

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ABSTRACT

Epidemiological data reveal that schizophrenia is a major world public health problem. It affects approximately 1% of the adult population, independently from sex and socio-cultural conditions. However, there are differences in gender concerning the onset and the development of this illness. Eighty patients with schizophrenia disorder (F20) by ICD-10, who had experienced a relapse of their illness, were assessed by the Rorschach technique. The results showed statistically significant genders differences in cognitive, affective and interpersonal interaction aspects. These results support earlier findings that found gender differences in schizophrenia: the disorder in male individuals tend to be more severe than in female, which affects adversely the behavior and social functioning of male patients.

Keywords: schizophrenia; gender defferences; Rorschach technique.

RESUMO

As Diferenças entre os Gêneros na Esquizofrenia através da técnica de Rorschach

Dados epidemiológicos apontam que a esquizofrenia é um problema mundial de saúde pública de primeira grandeza. Atinge 1% da população adulta, independentemente de sexo e condições socioculturais. No entanto, há diferenças entre os gêneros quanto ao início e curso da doença. Foram avaliados por meio da técnica de Rorschach 80 pacientes diagnosticados com esquizofrenia (F20), de acordo com os critérios da CID-10, com recidiva da doença. Os resultados mostraram diferenças estatisticamente significativas entre os gêneros no que diz respeito aos aspectos cognitivos, afetivos e interação interpessoal. Esses resultados sustentam os achados de estudos anteriores que encontraram diferenças entre os gêneros na esquizofrenia: o distúrbio nos homens tende a ser mais grave do que nas mulheres, o que repercute de forma desvantajosa no comportamento e no funcionamento social desses pacientes do sexo masculino.

Palavras-chave: esquizofrenia; diferenças entre os gêneros; técnica de Rorschach.

RESUMEN

Las diferencias de género en la esquizofrenia en la técnica de Rorschach

Los datos epidemiológicos sugieren que la esquizofrenia es un problema mundial de salud pública de primera magnitud. Afecta a 1% de todos los adultos, independientemente del sexo y las condiciones culturales. Sin embargo, hay diferencias de género en relación con la aparición y el curso de la enfermedad. Fueron evaluados por la técnica de Rorschach 80 pacientes con diagnóstico de esquizofrenia (F20), de acuerdo a los criterios de la CIE-10, con la recurrencia de la enfermedad. Los resultados mostraron diferencias estadísticamente significativas entre géneros con respecto a la interacción cognitiva, afectiva e interpersonal. Estos resultados apoyan las conclusiones de estudios anteriores que las diferencias de género en la esquizofrenia: el trastorno en los hombres tiende a ser más severa que en las mujeres, lo cual afecta negativamente afecta el comportamiento y el funcionamiento social de los pacientes varones.

Palabras clave: esquizofrenia, las diferencias entre los géneros; técnica de Rorschach.

Schizophrenia is a severe mental disorder, typically chronic, whose symptoms may be divided into three sub-syndromes: positive symptoms (delusion and hallucination), which are the absent symptoms in healthy individuals but present in schizophrenic ones; negative symptoms or absent in healthy individuals (affective and volitional impoverishment); and the symptoms of disorganization that may be present in normal persons, however, they are more chaotic and severe in schizophrenic people (puerile behavior, disorganized speech, cognitive and attention deficits and labile affect). Most of the evidences suggest that this disorder may involve a genetic predisposition that requires intrapsychic and interpersonal activation. This way, metabolic factors and environmental influences may protect or unleash the symptoms inherent to this illness in susceptible persons (APA, 2002; Lara, Gama and Abreu, 2004; Sadock and Sadock, 2007).

Epidemiological data reveal that schizophrenia is a major world public health problem. In average, these patients hold 50% of all places in psychiatric hospitals. It affects approximately 1% of the adult population, independently from sex and socio-cultural conditions. However, there are differences in gender concerning the onset and the development of this illness. The onset is generally early in men, usually between 15 and 25 years old. They are more likely to suffer from the negative symptoms, to remain single, commit suicide, have less quality of life, present problems related to drug use and criminal activity, as well as diminished social functioning, and resistance to efforts to treat the illness. For women, the onset of the illness is later. Many times, it is observed at the age of 25 or later, and for approximately 7% of these patients, the illness comes about after 40 years of age. In addition, these women, typically are married or divorced, and have children to take care of. They suffer, what appears to be a more benign form of schizophrenia with a more adequate social functioning and a more favorable response to treatments (Aleman, Kahn and Selten, 2003; APA, 2002; Cardoso, Caiaffa, Bandeira, Siqueira, Abreu and Fonseca, 2006; Chaves, 2000; Grossman, Harrow, Rosen, Faull and Strauss, 2008; Sadock and Sadock, 2007; Kelly, 2006; Ran et al., 2009; Rãsãnen, Pakaslahti, Syvãlahti, Jones and Isohanni, 2000).

Johann, Vaz and Derivi (2004) described the Rorschach data (Klopfer System) of some patients in the city of Porto Alegre, and observed some differences between the sexes. Women gave the impression of being more capable of attending to their experience in a reasonably open and flexible manner than men. They likely avoided either oversimplifying situations that were truly complex or overcomplicating those that were quite simple. Depite this personality asset they demonstrated a severe impairment of their reality testing abilities. This significant adaptive liability was likely to result in their frequent failure to construe the boundaries of appropriate behavior (F=42,0% and F-=46,5%). (F=42,0% and F-=46,5%). Female individuals presented a larger capacity to express their affection and feelings (ΣC=16,8%) but their affective discharges were more intense and less controlled (FC<CF+C), and they also showed fearful and tense relationships (M-=68,8% and M+=18,8%) than male individuals. In turn, male individuals showed less general control of their impulses and instincts, showing themselves more disorganized. However, they showed more ability on logical reasoning (F= 26,4% and F-=20,6%), more control of their affective discharges (FC=CF+C), although they rarely showed their feelings (ΣC=4,6%). As far as relationships, men were less tense and a little more empathic than women (M+=58,3% and M-=38,9%).

In scientific literature there are two studies where the Rorschach Comprehensive System (CS) was used to examine the differences between genders in schizophrenia. Both demonstrate that the CS is sensitive to subtle differences in the cognitive disturbances between men and women. In the first study, Perry and Braff (1995), in the United States, based on differences in the Ego Impairment Index (EII) found that schizophrenic male patients presented greater thought disturbances than female patients, who were more socially competent. The EII, generated from responses to Rorschach CS, is essentially a cognitive measure of disturbed thinking, the higher score in the male group entails more psychopathology, thought disturbance (test of reality deficits, illogical reasoning), and object relations problems, as well as dysfunctional behavior and adaptation failures.

In contrast, Danielsson, Flyckt and Edman (2001), focusing on sex-related differences with the cognitive aspects of schizophrenia in Sweden, found a greater EII for women. This result implies on larger thought disturbance in the female group than in the male goup, but this difference was not statistically significant. The authors justified this divergence with the results of Perry and Braff (1995) because the two studies had used very different samples. The participants of the Perry study were older chronic patients, and received higher doses of neuroleptic drugs, while in the study of Danielsson et al. (2001), the participants were younger, and 50% of them only had the first episode of the illness. Thus, comparing results of the studies might be confounded. Consistent with other reports, these two studies might suggest that there is an interaction with age, or that age may moderate gender differences.

Several studies prove that the differences between sexes are an important predictable factor in the course and evolution of schizophrenia, as they may also contribute to the elaboration of strategies of treatment and planning of health services more appropriate to these patients (Aleman et al., 2003; Cardoso et al., 2006; Chaves, 2000; Kelly, 2006; Rãsãnen et al., 2000). Besides these aspects, the Rorschach has demonstrated its validity in identifying the differences between genders in schizophrenia. Accordingly, this study investigates whether similar differences also occur in a Brazilian population, in the form of personality traits assessed by the Rorschach technique.

METHOD

Sample

Eighty patients, 40 men and 40 women, ages 20 to 55 years with a schizophrenia diagnose (F20) by ICD-10 (WHO, 1993) participated in this study. At the time of the study they had experienced a relapse of their illness and were in psychiatric hospitals in the city of Goiânia-GO, Brazil. Most (70%, n=56) were being medicated with typical, incisive antipsychotics, such as Haloperidol. Those patients with a maniac episode (F30), or a depressive episode (F32), which occurred before the characteristic symptoms of schizophrenia, as well as those patients with observable brain disease, and those ones who were in states of drug intoxication or withdrawal were excluded. The sample size (n=80) was statiscally determined in function of the prevalence of the illness in the population of Goiânia, i.e., 1% of 1,200,000 inhabitants, considering that in average 50% of the patients present comorbidity with an abuse of alcoholic substances and other drugs (Volkow, 2009), and, therefore, they could not take part in this study.

The participants constituted a purposive sampling. The researcher was aware of several psychiatric hospitals in the city and chose those that were typical and did her study with patients of those institutions. Then, case records of the patients at the Inpatient Departments were scanned initially to identify those who fulfill the study criteria. To calculate the minimum sample was applied the following formulas suggested by Barbetta (2004): $n_0 = 1/e^2$ and $n = N \cdot n_0/N + n_0$ [N=population size (6,000 schizophrenic patients), n=sample size, n_0=a first approximation to the sample size; e=tolerable error, for this study 11% error approximately].

Instruments

The psychiatrists interviewed the patients on the eight groups of ICD-10 signs and symptoms of schizophrenia noted their ratings on a form. The ICD-10 is the World Health Organization's (WHO) official classification of mental disorders and behavior, for clinical, educational, research and other purposes. These psychiatrists who helped with the research are well-trained in the ICD-10 and routinely use it in their practice.

Rorschach Technique. It is a personality assessment technique based on an indviduals making sense of 10, internally inconsistent and ambiguous designs based on ink blots. Responses to the question, "What might this be?" because the subject is given no guidance from the examiner, are based on the cognitive, affective structure, personal and interpersonal imagery, and concerns of the individual. Scoring across the ten cards allows these factors to be quantified. The way the subject processes and structures the contradictory and ambiguos elements of the ink blot design reflects the way he or she proceses information in life, so that the Rorschach performance is generalizable to every day life. In this study, the classification and interpretation of the Klopfer system was adopted, as adapted and validated by Vaz (1997, 2006), but at times different interpretation systems were used where appropriate (Exner, 2003). The Rorschach variables analyzed for this study were grouped in terms of cognitive and affective, and interpersonal component as described in Table 1.

TABLE 1
Rorschach variables distributed by groups referring to the cognitive and affective aspects, and interpersonal integration

Component	*Rorschach variables*
Cognitive	R, G%, D%, Dd%, F%, F-%, M, M-, Pop, Abstractions ΣSpecial Phenomena*, Type of Experience
Affective	ΣC, FC<CF+C, Cn, ΣShaded, ΣC', Affection Index, S, Type of Experience
Interpersonal	M, M-, FM, ΣH, H+A: Hd+Ad, H<(H)+(Hd)+Hd, Sex, At, Σc e Deterioration Comments

* ΣSpecial Phenomena This summation response characteristics indicative of cognitive impairment or a tendency to reason in an unfounded or arbitrary way such as contamination, confabulation, rejection, self-reference, position responses, neologism and perseveration.

Patients' Medical Records. They are used to collect demographic and other relevant data including profession, age, school level, previous symptoms of the treatment and medication used before the Rorschach assessment.

Procedures for collecting data

The board of directors of three psychiatric hospitals was contacted to procure their consent to implement this study. After the authorization from the director of each hospital, we together with the psychiatrists selected

the eligible patients according to the study's inclusion and exclusion criteria. Also the researcher reviewed the patient's medical report to further evaluate sample exclusion criteria. Before the assessment, we tried to contact each patient in order to invite and motivate them to participate in the research, as well as to obtain their and also their responsible party's informed consent, according to standard ethics rules for research with human beings.

In 75% of the cases (n=60), the Rorschach was administred after the psychiatrist's completing ICD-10 schizophrenia form. In other case, a maximum period of one week passed after the ICD-10 survey were completed. The Rorschach was administered in a standard fashion, following the instructions described by Vaz (1997), in appropriate hospital rooms. However, this was a complex task and involved techniques that are relatively uncommon with people free from psychotic disorders. In some cases we allowed short interruptions for questions, to rest, so as to continue with the test when the patiens were more attentive and motivated. After such intervals, 14 tests were not completed and were excluded from the sample.

Procedures for data analysis

The author of this article coded all the records. For the intercoder agreement, another psychologist, who did not know the objective of this study, but was also trained in the Klopfer Rorschach System (Vaz, 1997), coded 25% of the protocols (20 in total), selected at random. Intercoder agreement, or reliability, was deteremined by the *Kappa* coefficient. It quantifies the reliability on an individual response score level taking into consideration chance agreement. Discrepancies were resolved by discussion between the two coders.

The male and female patients were compared on key demographic and Rorschach variables with the use of Student's test for parametric data for instance for age, education, daily dose of medication, and for the F%, G% and D% variables, whereas Mann Whitney Tests were used for non parametric continuous measures, for exemple for Special Codes. The Chi-square test was applied to nominal variables, for example, Rorschach Experience Type and presence of ICD-10 schizophrenia symptom groups. The significance level used was $p \leq 0,05$. All the analyses were conducted using the SPSS computer program, 12.0 version.

RESULTS AND DISCUSSION

Agreement level between judges

The *Kappa* coefficient between the two evaluators of the Rorschach techique varied between 0,86 and 0,94 ($p<0,001$), indicating that there was a high agreement between the judges and that the correction of the Rorschach technique for this study is considered reliable. Interrater reliability satistics are provided in Table 2 for the basic scoring segments of each response.

TABLE 2
Rorschach interrater agreement on conding segments
(n= 20 protocols, total resposes= 269)

Categorias	*Kappa*	*P*
Location	0,94	<0,001
Determinant	0,86	<0,001
Contents	0,89	<0,001
Popular	0,92	<0,001
Special Codes	0,86	<0,001

Clinical assessments and demographic data

Eighty people with an ICD-10 diagnosis of schizophrenia participated in this study, 50% were men and 50% were women. Among the men, 17,5% (n=7) were married, 82,5% (n=33) were single, divorced or separated. Among the women, 30% were married (n=12), 70% were single, divorced, separated or widows. Some comparisons of the clinical and demographic assessments are presented in Table 3. Significant differences between genders were found in the variables: age and group of Symptoms 2 for schizophrenia.The other variables (years of study, medication dose of Haloperidol type and the other groups of Symptoms – 1,3,4,5,6,7 and 8 did not highlight significant differences between men and women.

TABLE 3
Differences between genders for clinical and
demographic variables (n=80)

Clinical and demographic variables	*Men (n=40)*		*Women (n=40)*		*Sig*
	Mean	*SD*	*Mean*	*SD*	
Age	36,43	10,76	40,73	7,98	**,041****
Education (years)	7,42	3,23	6,41	2,34	,087
Haldol dose mg/day*	10,12	4,91	9,30	4,06	,885
F20 Symptom Group 1	0,30	0,46	0,30	0,46	1,00
F20 Symptom Group 2	0,38	0,49	0,65	0,48	**,016****
F20 Symptom Group 3	0,35	0,48	0,43	0,50	, 500
F20 Symptom Group 4	0,38	0,51	0,28	0,45	,069
F20 Symptom Group 5	0,43	0,50	0,35	0,48	,489
F20 Symptom Group 6	0,08	0,27	0,15	0,36	,293
F20 Symptom Group 7	0,13	0,34	0,10	0,30	,732
F20 Symptom Group 8	0,63	0,49	0,45	0,54	,102

* Variable observed only in 70% of the sample (n=56, 22 men and 24 women), that used this medication.
** Significant difference p<0.05.

According to data in Table 3, it can be noted that men were significantly younger than women. Regarding age, it is known that the sooner the disease is detected the worst the prognosis. A late onset of schizophrenia is a positive or protective factor, because when the first episode happens at a later age it helps the patient to better develop his abilities and social experiences before the disease, as well as to acquire more knowledge, and probably, to have a larger internal resilience and resistance to the psychopathology (Grossman et al., 2008). The significant older age of the female group suggests this protector factor in those patients, but unfortunately onset dates were not available in this study.

The women also revealed that they suffered expressively more than the men of the second group of typical symptoms of schizophrenia delusions of control, influence or passivity, clearly referred to body or limb movements or specific thoughts, actions, or sensations; delusional perception. Many times the patient with these symptoms feels like a passive victim of imperative voices or strange cenesthesia. In women, these cenesthesic complaints are often located mainly in the genital organs; they complain about being victims of sexual intercourse, sexual assault, and masturbation. Such cenesthesic delusion phenomena are also frequently considered persecutory (Paim, 1991).

It is probable that these delusion symptoms may be responsible for part of the damages that the women of this study demonstrated in the capacity of relationship, becoming more anxious, tense and inadequate during relations with other, causing undesirable situations in social integration. This type of delusion may also be considered as a system of relations that neglect the reality principle and that conducts to the creation of a new reality that, in the case of the women of this study, may translate the intense sexual anxiety that are expressed in a chaotic way.

On their turn, men seem to suffer more from ICD Symptom Group 8 – *"negative" symptoms*. This group of symptoms, expressed by a global impoverishment of the psychic and social life of the patient, do not respond well to neuroleptic medication and make it difficult to establish the initial schizophrenia diagnosis. These symptoms are often confused with depression, so as to confuse judgments about the medication. Differently, the group of symptoms 2, better administered by the neuroloptic medication, which affects women significantly, is part of the positive symptoms of the disease which are flowery and productive in the schizophrenic process. They appear as an exaggeration or intensification of psychic functions, and they are easily detectable as classic so as to aid accurate diagnosis. In contrast to negative symptoms and group 2 symptons they make early identification of the disorder easier. In contrast to the men, the group of women in this study had a more benign form of schizophrenia.

In Table 4 the cognitive Rorschach variables are presented. Table 5 containts E*xperience Type (Erlebnistypus)* results.

TABLE 4
Differences between genders for cognitive Rorschach variables

Rorschach cognitive variables	*Men (n= 40)*		*Women (n= 40)*		*Sig*
	Mean	*SD*	*Mean*	*SD*	
R	13,63	8,14	13,93	5,47	,847
G%	50,98	29,42	64,30	26,36	,036*
D%	33,00	14,94	32,09	18,06	,899
Dd%	36,17	24,5	21,96	18,19	**,004****
F%	66,75	14,80	58,63	15,30	,018*
F-%	50,28	30,49	54,08	28,24	,565
M	0,88	1,37	1,30	1,92	,147
M-	0,90	1,24	1,03	1,59	,227
FM	1,02	1,10	1,15	1,42	,661
Abstraction	0,78	1,38	0,78	1,40	1,00
ΣSpecial Phenomena	11,33	7,98	7,93	4,66	,048*

* Significant difference p<0.05.
** Significant difference p<0.01

TABLE 5
Chi-square contrasts of Rorschach Experience Type by gender

Types of experience	*Male*	*Female*	*Sig*
Coarctated	26	16	**,043***
Introversive	6	14	,069
Extratensive	8	10	,790
Total	40	40	

* Significant difference p<0.05.

Tables 5 and 6 show that there are statistically significant differences among the patients with schizophrenia from the male and female sex in the *Dd%, F% variables,* E*xperience Type Coarctative and ΣSpecial Phenomena,* all of them with a higher frequency level among men, and in the *G%* variable that was higher among women. These data indicate that not only male patients, but also the female ones presented diffuse attention ($Dd\%_{men}$=36,17, $Dd\%_{women}$=21,96) and used inconvenient generalizations $G\%_{men}$=50,98, $G\%_{women}$=64,30). In general, this is the way schizophrenic patients collect and process information. However, the male patients were the ones that worried the most with more insignificant and detailed aspects of the stimulus (Dd% 36,17, p<0.01). When directing their attention to the surroundings, they had less ability to ignore distracting stimuli, showing themselves more incoherent and insecure than female patients.

It was also observed that men with schizophrenia tend to simplify complex situations more, searching for simpler, superficial, and more disengaged solutions for their problems (*F%*=66,75, p<0.01). At the same time, they demonstrated more frequently the *Coarctated Experience Type* (p<0.05), which is a characeristic of a person with limited imagination and psychological resources to call in coping situations. These findings together, herefore, showed that men were less capable of adaptation than women. Besides, the greater *Special Phenomena score* for men shows that they demonstrate more illogic and disturbed thinking and problem-solving, tending to reason in an arbitrary and disconnect way, as well as being more inclined to irrelevant revery that undermines others' understanding them. Thus, in a general way, the male patients with schizophrenia presented a more severe disturbance than the female patients. They reasoned in a more superficial, rigid and incoherent way (*Dd%, F% index, Type of Coarctative experience and higher Σspecial phenomena*) than female individuals with the same disorder. The female patients showed a larger more inclusive problem-solving style, with more ability to think flexibility and elaborate mentally. They also demonstrated a richer fantasy life. *(High G%, lower F%, M and Type of introversive experience* slightly less frequent than male patients). These differences allow us to conclude that women with schizophrenia in our sample had more access to the complex psychological resources, demosntrating less cognitive damages than the men.

Table 6 presents the affective Rorschach variables. The *ΣC* variable was significantly higher among women, while in men the *White Space* variable (*S*) showed itself as more frequent. These data suggest that women with schizophrenia showed a better capacity to live and express affect than men, thus suggesting less limitations in adaptation (ΣC_{men}=1,21, ΣC_{women}=1,45, p<0.05).

On the other hand, male patients excelled for presenting more situational anxiety ((S_{men}=1,35 e S_{women}=0,65, p<0,05), according to Vaz (1997). According to Exner (1999), the increase of the *S* variable reveals opposing tendencies that go beyond adaptive autonomy and that associates itself to underlying feelings of anger and resentiment against people and events of their lives. In this case, the male group, more than the female one, tend to feel unfair the fact of not answering to their needs or raise obstacles in the achievement of their goals. This fact interferes in the delightful and affection experience, as well as it generates problematic and hostile behaviors that do not solve the problems. It may be inferred that there is a higher predisposition in the male group to react in a more agressive way to situations – this aspect was also highlighted in the study made by Weiss, Marksteiner, Hinterhuber and Nolan (2006). Besides, the affect of the male patients are slightly blunter and with more sadness ($\Sigma C'_{men}$=1,40 e $\Sigma C'_{somen}$=0,95), and they also expressed more intense affection disorders, typical psychotic or organic deterioration (Cn_{men}=0,70 e Cn_{somen}=0,18).

TABLE 6
Differences between genders for affective Rorschach variables

Rorschach cognitive variables	*Men (n= 40)*		*Women (n= 40)*		*Sig*
	Mean	*SD*	*Mean*	*SD*	
ΣC	1,21	2,54	1,45	1,28	,029*
FC<CF+C	–		–		,081
Cn	0,70	1,71	0,18	0,50	,132
Σshaded	1,71	1,04	1,45	0,85	,141
ΣC'	1,40	1,94	0,95	1,19	,217
Affective Ratio	0,29	0,08	0,28	0,10	,898
S	1,35	1,92	0,65	0,94	,043*

* Significant difference p<0.05.

These data, in consonance with the studies, reveal that the women with schizophrenia who participated in this study have superior affective adaptation, with more satisfying and enjoyable affective experiences compared to the the men diagnosed with the same disease.

On what concerns the capacity of interpersonal integration, Table 7 points out the *Sex* and *Σc* variables as significantly more common among women than men with schizophrenia.

TABLE 7
Differences between genders for interpersonal Rorschach variables

Interpersonal variables	*Men (n= 40)*		*Women (n= 40)*		*Sig*
	Mean	*SD*	*Mean*	*SD*	
ΣH (H+(H)+(Hd)+Hd)	3,00	3,11	2,93	2,77	,910
H<(H)+(Hd)+Hd	29 frequencies		26 frequencies		,753
Sex	0,40	1,00	1,45	1,52	**,005****
Deterioration comments	2,30	1,88	3,10	2,93	,433
Σc	0,15	0,42	0,40	0,59	**,036***

* Significant difference p< 0.05.
** Significant difference p< 0.01.

The Rorschach *Sex* variable indicates that women presented more somatic concern, particularly related to sexuality (Sex_{men}*=0,40 e* Sex_{women}*=1,52, p<0,01*). Additionally, these sex responses in conjunction with symptom group 2 findings, suggest that women

might more often experience sexualized content within misinterpretions of reality, idiosyncratic preoccupations, delusions and hallucinations. These might be more frequent among women. However, due to the simple fact that it is a more intense concern for these patients, the treatment should integrate not only a safer sanctuary for sexual anguish, but also should consider sexual education as an important part in these disease interventions.

Besides these bodily concerns, these patients demonstrated more need for affection and social contacts than men (Σc_{men}=0,15 e Σc_{women}=*0,40, p<0,05*). Probably, this is the aspect that make women more inclined to establish intimate closer relations, and support than male patients. Again, the data show that these women are more engaged in life. However, considering the various aspects assessed by other variables, it is noticed that, relative to normative expectations, the two groups tend to direct their attention to themselves and to the other with the same frequency (*ΣH* without significant difference between the groups), and both are characterized by their limited capacity to understand themselves and others (*H<(H)+(Hd)+Hd*), with a less comprehensive and more fantasy-based self-image and perception of the others. This distorted perception causes an emotional unease and discomfort in the interpersonal relationships and makes social relations difficult to establish and maintain.

FINAL CONSIDERATIONS

This study addressed gender differences in schizophrenia, which had not been attempted in Brazil, with Klopfer and Vaz Rorschach technique. They support previous studies that male patients demonstrated more severe cognitive disorders, greater affective deficits, and more negative symptoms of the disease. All of these harms the male patients' interpersonal relations, more than with female patients. To further evaluate these findings it would be interesting to conduct longitudinal studies involving different phases of the disease process and the patient's treatment. It may be interesting to develop a future research relating age to Rorschach variables and compare it to the present study that focus on gender.

Other factors, undoutedly, are related to these gender differences in schizophrenia. These gender specific aspects probably include genetic, prenatal, developmental, and hormonal factors, differences in cerebral structure, differences in social expectations, social support systems , among other factors that have been addressed in the literature about schizophrenia (Andersen, Gade, Fagerlund, Orange and Glenthoj, 2009; Goldstein et al., 2009; Grossman et al., 2008; Mancini-Marie et al., 2009; Mendrek et al., 2009; Werf, Boydell, van Os, Murray and Allardyce, 2009).

It should also highlighted that the Rorschach gender differences observed in our study are not observed between genders in the Rorschachs in the general population. The Rorschach normative data incorporate very little differences between men and women (Exner, 2003, Nascimento, 2007; Vaz, 1997, 2006). Therefore, the differences found between genders may be effects induced, partly, by the disease itself.

In this investigation, additional aspects related to gender are highlighted. Men were significantly younger than women, and tended to reason in a simpler, superficial and incoherent way. They were less emotionally expressive and engaged and more affetively constriced, but showed more situational anxiety and sadness along with a predisposition to hostile behaviors.

Women with schizophrenia, besides apparently manifesting the disease at a later date, were more likely to be married, and were more likely to experience positive symptoms in the form of *delusions of control, influence or passivity,* as well as concerns related to their body and sexuality. They felt freer to express their feelings and thoughts, and to seek out close relations. Compared to negative symptoms, their positive symptoms may help in the accurate identification of the disease and may be more responsive to neuroleptic medication. All these gender differences, taken together make schizophrenia in the female sex a more benign form of the disease than for male sex.

This research demontrates that the Rorschach is a useful technique for the study of genders differences in schizophrenia expressed in cognitive and affective processes, self-perception and interpersonal relations. This type of information accessed by the Rorschach is not easily assessed by psychological interviews with these patients with schizophrenia. In face of what was exposed in this study, it is understood that the differences between genders in schizophrenia must be considered not only during psychological investigations, but must be integrated with the treatment program of people assailed by this disease. Treatment strategies recognizing the differential impact of the disease on men and women might contribute to more appropriate community health service plans, make treatment more effective, and minimize relapse.

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Recebido em: 21/05/2009. Aceito em: 28/10/2009.

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