Attachment Styles, Reality Testing Impairment and their relation to Insight among Patients with Schizophrenia

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Abstract

Background: Patients with schizophrenic experienced varying levels of loss close with reality. Personnel with insecure attachment styles may have issues in accurately perceiving as well as interpreting external reality. **Aim:** The study aimed to inquire relation between attachment styles, reality testing impairment and insight among patients with schizophrenia **Research design:** A descriptive correlational design. **Sample:** A purposive sample of 90 in-patients with schizophrenia. **Tools**: Four tools were utilized to collect data **,** demographic and clinical data questionnaire **,** Psychosis Attachment Measure (PAM)**,** Bell Object Relation and Reality-Testing Inventory (BORRTI) and Beck Cognitive Insight Scale (BCIS)**Results:** the findings of the actual study generally showed a significant negative correlation between reality testing impairment and insight .Also, there was a negative relation between attachment styles and insight as well as attachment and reality testing impairment . **Conclusion:** The majority of studied sample showed insecure attachment style , Three quarters of studied sample had moderate reality testing impairment. Slightly above fifty percent of studied sample had low insight. **Recommendations:** For people with schizophrenia, psychoeducational programs are recommended for enhancing insight and eliminate reality impairment.

***Keywords*:** schizophrenia, attachment styles, reality testing impairment, & insight.

Introduction

Schizophrenia is a hallmark of mental illness which is marked by serious difficulties in reality testing as well as modifications in behavior that essentially manifest in both types of symptoms: the positive symptoms as delusions, hallucinations, disorganized speech or behavior, and negative symptoms such as blunted or flat impact, avolition, or apathy. It starts typically in adolescence or early adulthood (**Arango et al. , 2022).** It takes six months of symptoms, including at minimum of thirty days of active symptoms. to diagnose schizophrenia **(Hurley, 2019)**.

The initial standard choice of therapy for schizophrenic patients is anti-psychotic drugs which cause control of psychotic features during 7-14 days **(Ageeb, 2023)**.Generally; attachment describes a strong, enduring emotional bond that ties a person to another throughout time and distance. **(Zayas and Sakman, 2020).** Secure attachment means the ability to create emotionally intimate and stable interpersonal connections with a general sense of being deserving of love, paired with the anticipation that others are available and responsive in period of hardship **(Van Bussel et al., 2021).** Patients with insecure attachment lose the ability to control how they react in stressful condition, which may generate their 1st psychotic episode. Loss of ego boundaries, paranoid delusions, and auditory hallucinations can all be brought on by high levels of insecurity **(Saad et al., 2021).**

Reality testing has been acknowledged that one of function ego which enables the person to discriminate between their external as well as inner world. Individuals with schizophrenia had various levels of bad close with reality (**Ferguson, 2022).** These abnormalities in testing reality might generate symptoms as delusions, hallucinations, or traits changes **(Kingdon et al., 2022).** Three areas typically show signs of testing reality: distortion reality, perception doubt, delusions as well as hallucinations **(Drinkwater et al., 2020).**

Insight describe as realizing a mental issue, the consequences it causes, and the necessity of receiving treatment **(Vollenweider and Preller, 2020).** According, Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR), personnel with schizophrenia don't fully understand that personnel have a psychotic disorder (**Manea et al., 2020).** Conversely, people who have an insecure attachment style can be more similar to struggle on reality tests. Patients may be more prone to see unclear circumstances as dangerous, which could heighten their suspicion or paranoid thoughts. This may make it more difficult for them to evaluate the veracity of their ideas and perceptions **(Lahousen, et al., 2019)**.

Based on studies, attachment styles could influence reality testing and insight in people with schizophrenia, personnel with insecure attachment styles may have issues in accurately perceiving as well as interpreting external reality which, contribute to the determination of psychotic symptoms as well as a lack of insight into their illness **(Bonnemort, 2020).**

From a therapeutic perspective, patients with schizophrenia need for adequate psychosocial interventions, instead of rather than a reliance on medication. It is better for mental health care practitioners to adopt attachment-informed psychotherapies that may aid patients in developing thinking skills and adjusting attributions, therefore improving their social and occupational functioning, diminishing paranoid delusions, as well as minimizing the likelihood of relapses. **(Muscat, 2021).**

Psychiatric nurses also, have a positive result and can assist patients alteration their attitudes for the disease and improve their insights to enhance positive outcomes (**Clifford et al., 2020**). Moreover, psychiatric nurses playing a positive role in the implementation of various forms of cognitive

behavior treatment as cognitive social therapy, metallization as well as cognitive analytic treatment for individuals with insecure attachment styles to adjust the intensity of reality-testing impairment **(Yalof and Bram, 2020).**

Significance of the study

Related to **Yan et al. (2023),** the incidence of schizophrenia is roughly 1.5 per 10,000 persons, and the prevalence is close to 1% worldwide. However, schizophrenia affects about one percent of people in Egypt, which translates to nearly 1 million sufferers. Additionally, in Egypt's psychiatric hospitals, schizophrenia accounts for roughly 50–60% of all mental illnesses **(Okasha et al., 2023).**

According to **Carpenter (2019),** reality testing impairment was seen in almost 70% of the patients with schizophrenia. Between fifty to eighty percent of personnel with schizophrenia are said to have poor insight into their mental diseases, according to **Lysaker et al. (2022). Partridge et al. (2022)** came to the conclusion that understanding acted as a partly mediating factor in the association between attachment and negative symptoms. Few research, meanwhile, have looked at how these individuals' insight and attachment style relate to one another (**França et al., 2020).** It's also essential to recognize the intricate and multifaceted interaction that exists between insight, reality testing, and attachment types in schizophrenia (**Weijers et al., 2020**).

Aim of the study:

The current study aims to investigate the relationship between attachment styles, reality-testing impairment, and insight among patients with schizophrenia.

Research questions

- What are the levels of attachment styles, reality-testing impairment, and insight among patients with schizophrenia?
- Is there a relationship between attachment styles, reality-testing impairment, and insight among patients with schizophrenia?

Subjects and Method.

Research Design:

In order to achieve the goal of the current study, a descriptive correlational study design was applied.

Setting:

The research was done in Minia Psychiatric Health and Addiction Treatment Hospital in New Minia City, Upper Egypt, which is associated with the Ministry of Health. Also, a hospital is divided into inpatient departments (psychiatric and addiction) and outpatient clinics; the mental departments have a bed capacity of 53. The hospital introduce serves for the Minia governorate as well as its nine districts.

Patients:

A purposive sample consisted of ninety patients with schizophrenia admitted to the inpatient psychiatric unit at the previous hospital with the criteria. The average number of schizophrenic patients was 300 in the last year (2022) at this hospital. The number of patients was calculated by the **Isaac and Michael (1995)** formula, that was computed (N = n x 30 / 100), in which (N = size of the sample) and (n = number of total schizophrenic patients in the past year). N=300 x 30 / 100=90 patients.

Inclusion Criteria:

Patients with schizophrenia were chosen using the following standards:

1. Both sexes were aged between 18-50 years.
2. Patients with schizophrenia diagnosed by the psychiatrist according to DSM5 .

Exclusion Criteria:

- Patients with organic brain diseases.
- Mentally handicapped patients.
- Patients with dual diagnosis.

Data collection tools:

Tool I-Personal and clinical data questionnaire:

The researchers reviewed pertinent literature before creating this questionnaire. The patient's age, gender, place of residence, level of educational, marital status, working status, length of illness, as well as number of admissions were all covered by the tool.

Tool II:- The Psychosis Attachment Measure (PAM)

Berry et al. created the PAM (2006). It has sixteen items: eight that measure anxious attachment and eight that measure avoidant attachment, with three of the items being reverse-scored (2, 3, & 5). Every item was scored using a four-point Likert type scale, with 0 denoting "not at all" as well as 3 denoting "very much."

- Negative values indicate avoidant attachment.
- Positive values indicate anxious attachment.
- Zero indicates balanced attachment.

Tool III:Bell Object Relation and Reality-Testing Inventory (BORRTI)

Bell et al. (1985) created the BORRTI. There are forty-five true or false items divided into 3 subscales: first "reality distortion," the second "uncertainty of perception," as well as the third "hallucination as well as delusion." The first subscale includes thirteen questions that address abnormalities in perceptions of outer reality and imagination, as delusions of impact, thought withdrawal or the broadcasting, depressed views, and/or beliefs of paranoid. It also conveys perplexity in both the individual's and others' sentiments.

The second subscale consists of twenty-seven questions that express an individual's skepticism regarding the correctness of their perception. They involve suspiciousness in patients' and others' behaviors and feelings, with five categories graded in reverse (23, 27, 33, 37, and 40). Lastly, the hallucinations as well as delusions subscale includes five questions that indicate a serious disintegrate in reality testing in the shape of hallucinations as well as delusions. All 45 inventory statements are graded as (0) for incorrect assertions and (1) for correct ones.

Scoring system

- Scores from 0 to 14 means mild reality-testing impairment.
- Scores from 15 to 29 means moderate reality-testing impairment.
- Scores from 30 to 45 means severe reality testing impairment.

Tool IV: Beck Cognitive Insight Scale (BCIS)

Beck, (2004) developed BCIS. On a four-point Likert scale, with zero representing complete disagreement and 3 representing complete agreement, it consists of 15 statements. There are two subscales within it. Nine items evaluating truthfulness, contemplation, openness to feedback as well as given the label self-reflectiveness. Six items in the second subscale assess taking decision as well as resistance to feedback.

Scoring system

- Poor insight is indicated by a score of 3 or less.
- Moderate insight is indicated by a score of 4–9.
- Good insight is indicated by a score of 10 or more.

Validity and reliability

Five panels of jury specialists in the fields of psychiatry and mental health nursing from Minia and Assiut University evaluated the translated instruments into Arabic. The validity of the tools was tested by translation and back translation. The translation was changed as needed. The statistician examined the instruments' reliability, which the supervisors amended.

Reliability of the study instruments were verified by the test of Cronbach's alpha. Also, the results of the reliability testing through Cronbach's alpha for the PAM, BORRTI, and Beck cognitive insight scale were 0.86, 0.84, and 0.85, respectively. This suggests that the variables being studied have a high degree of reliability.

Pilot study

In order to test the research process, assess the effectiveness, completeness, viability, objectivity, and application of the study, find any limitations in the approach or instrument's methodology, as well as determine the time needed to fill the tools, a pilot research was applied (ten percent) of the total number of patients in the studied sample (9 patients). The validity of the instrument was further supported by the ease with which the tools were completed. Since no tools were changed, the pilot research sample was incorporated into the basic study sample. Furthermore, Pilot testing assisted the researcher plan for data gathering of study tools that can be used.

Study Procedure

- The Minia University Faculty of Nursing's Research Ethical Committee granted written initial acceptance for this study; the study fellow shared ethical involvement in clinical research; the study sample is not at risk during its application; and privacy was maintained throughout data gathering.
- Official permission to collect data was requested from the dean of Minia University's nursing faculty and the head of the hospital.
- In an attempt to obtain the patients' cooperation, acceptance, and secrecy, the nature as well as objectives of the study were explained to them immediately and personally before they gave their oral informed consent.
- The investigator visited inpatient psychiatric hospital departments on Saturday as well as Thursday between 10 a.m. and 1 p.m. It took approximately twenty minutes to complete each patient's questionnaire. Schizophrenic patients (almost five every day) were questioned one-on-one to complete the study tools. The number of inpatients present was sufficient to collect the required data. The data was gathered over a four-month period, from early December 2023 to March 2024.

Ethical consideration

The Minia University Faculty of Nursing's Research Ethical Committee granted written initial acceptance for this study; the study fellow shared ethical involvement in clinical research; the study sample is not at risk during its application; and privacy was maintained throughout data collection. The data was coded to ensure anonymity and confidentiality, and patients are free to leave the research at any time without clarification.

Statistical analysis

IBM® SPSS® (version 26. SPSS Inc., IBM Corporation, Armonk, NY, USA) was used to perform the statistical analysis. Microsoft Office 2010 and Excel were used to create the graphics. The frequency distribution was used to display the qualitative data, however the mean as well as deviation standard were utilize for the quantitative data. The means of both groups were compared using a student t-test. Within each group, the relationship between numerical variables was described utilize Pearson correlation analysis. When the p-value was low 0.05, it was deemed statistically significant.

Results

Table (1): Frequency distribution of Personal as well as clinical characteristics of patients (N =90)

Personal data	No	Percent (%)
1- Age		
18-30	50	55.6%
31-50	40	44.4%
2- Sex		
Males	76	84.4%
Females	14	15.6%
3-Residence		
Urban	35	38.9%
Rural	55	61.1%

Personal data	No	Percent (%)
4-Marital status		
Single	48	53.3%
Married	24	26.7%
Divorced	18	20%
5-Education		
illiterate	45	50%
Secondary	40	44.4%
University and above	5	5.6%
6-Working status		
Worked	66	73.3%
Not worked	24	26.7%
Clinical data		
1-Duration of illness		
< 1 years	49	54.4%
1 to < 3 years	27	30%
3 to < 5 years	8	8.9%
≥ 5 years	6	6.7%
2-Frequency of hospital admission		
once		
twice	10	11.1%
≥ three times	42	46.7%
	38	42.2%

Table (1) represents that about 84.4 percent of studied patients are males, while 50 percent are illiterate. In addition, slightly more than half of the studied patients (55.6%) are in the age group of 18–30 years. As regard marital status, 53.3% are single. Furthermore, 73.3%) of the studied sample are working, and 54.4% of the studied patients have had schizophrenia for less than 1 year. Besides, 46.7% of patients had been admitted for two times.

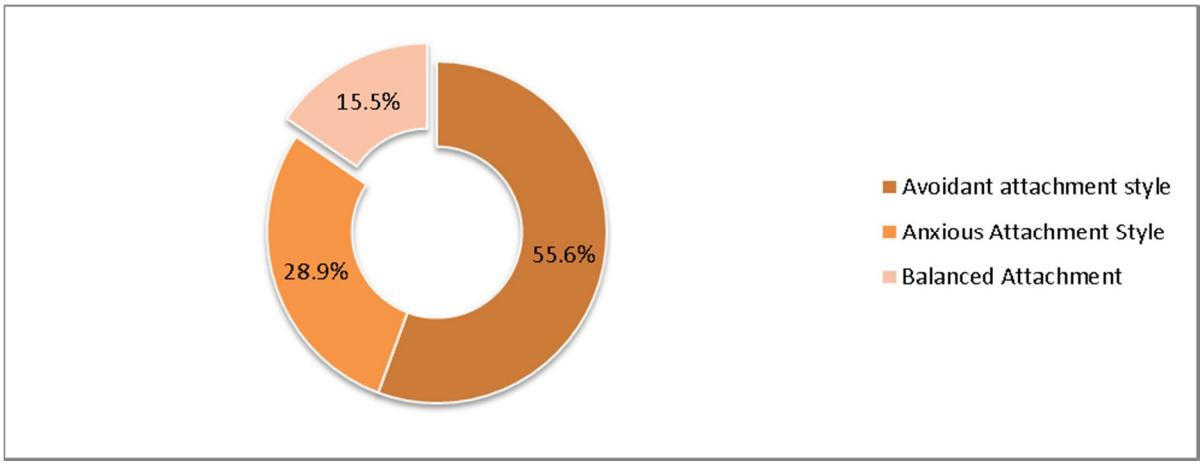

Figure 1: Frequency distribution of patients' Psychosis Attachment Measure (N=90)

Figure (1) shows that 55.6% of patients have an avoidant style, 28.9% have an anxious attachment style, and only 15.5% have a secure attachment style.

Figure 2: Frequency distribution of patients' levels of reality testing impairment (N=90):

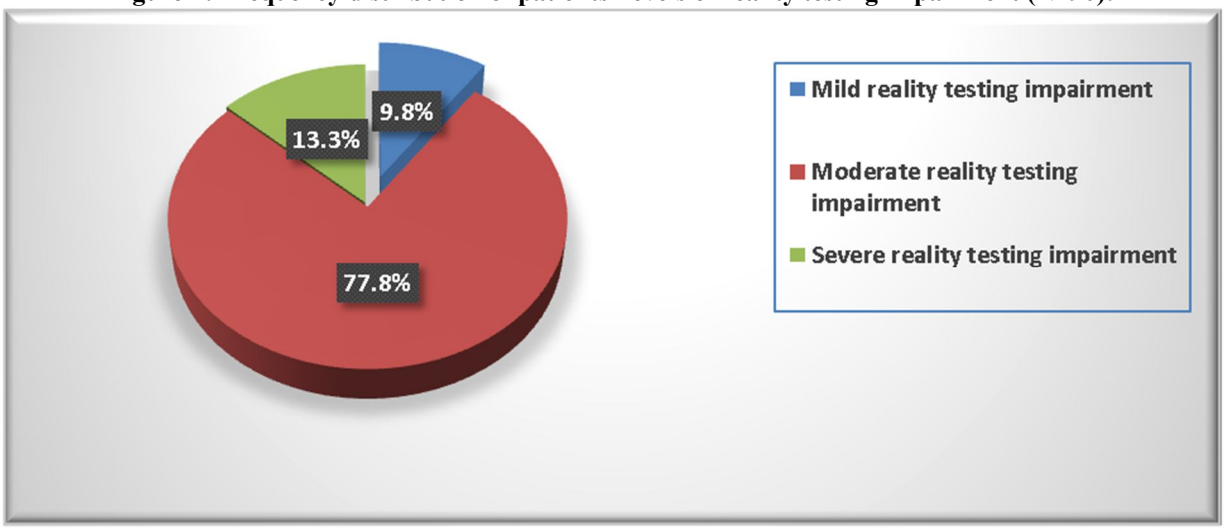

Figure (2) shows that about 778.8% of studied patients have moderate reality testing impairment. Whereas 13.3% have severe reality testing impairment and 9.8% have mild reality testing impairment with a mean score of 22.06 ± 5.8%.

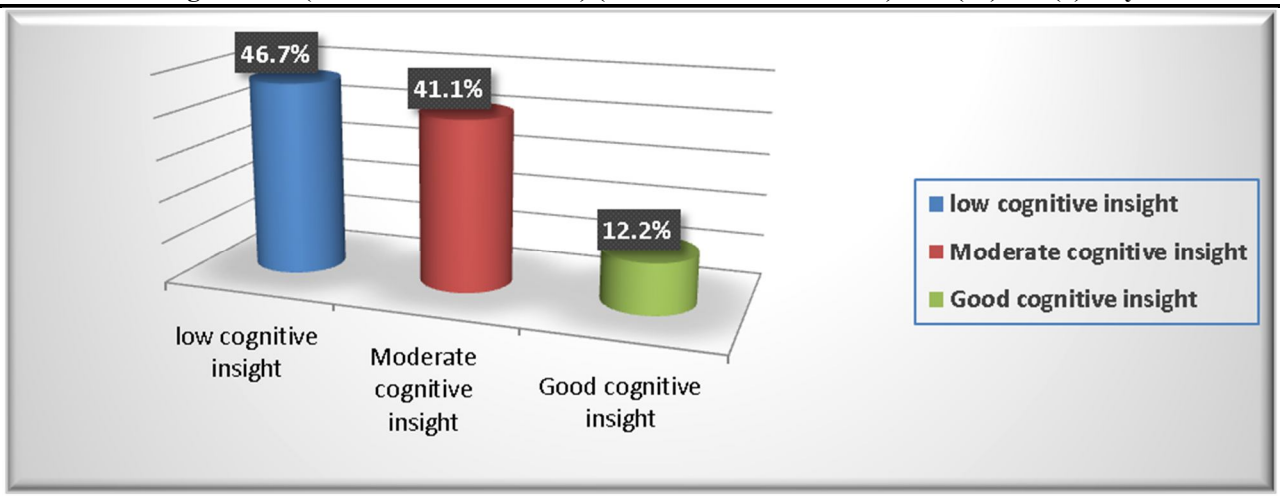

Figure 3: Frequency distribution of patients' Beck Cognitive Insight scale (N=90)

Figure (3) illustrates that 46.7% of patients have low insight. While 41.1% have moderate insight and 12.2% have good insight.

Table (2): Correlation matrix between attachment styles, reality testing impairment, and insight scores (N =90)

		PAM	BORRTI	BCIS
PAM			-0.124 (0.246)	
BORRTI	**rs(p value)**			-0.344 (0.001)
BCIS	**rs(p value)**	0.203 (0.05)		

NB: rs: Spearman coefficient
****Correlation is significant at the 0.01 level. * p≤0.05 (significant)**
****p≤0.05 (highly significant), P-value based on Pearson correlation coefficient**

Table (2) reveals that there is a high significant negative correlation between reality testing impairment and insight among the studied patients with a p value of 0.001. Also, there is a significant positive correlation between attachment styles and insight among the studied patients with a p value of 0.05.

Discussion

Pertaining to the patients' clinical and personal variables. In terms of age, the actual study showed that over fifty percent of the patients were in the 18–30 age range. The fact that schizophrenia issues typically appear in early adulthood may help to explain this. This outcome aligns with the findings of **Desalegn et al. (2020),** they found that almost half of individuals with schizophrenia were younger than 33. **Aziz et al. (2017),** on the other hand, observed that around half of individuals with schizophrenia were between the ages of 40 and 50.

The actual study's findings related to the sex revealed that males represented the greatest of the sample. This result may be explained in the light of cultural as well as attitudes differ that observe women admission is stigmatizing so as to reduce women hospitalization. This line in**Abd-Elmonem et al.** (**2019**) reported that approximately sixty- six percent of schizophrenia patients were men. The findings were also in context with **Bansal et al.** (**2022**) who reported that above fifty percent of schizophrenia patients were males as well as that men tend to have displayed more premorbid behaviors than women.

The results of the actual study on educational accomplishment showed that fifty percent of the investigated sample was illiterate. These results demonstrated how schizophrenia affects cognitive processes, which in turn affect academic performance. This outcome is in line with **Desai & Nayak's (2019)** discovery that the greatest of the study sample had lower levels of education. Additionally, **Gomez-de-Regil et al. (2018)** reported that slightly more than fifty percent of the sample under study had only a secondary or lower level of education. However, **Fanta et al. (2017)** discovered that almost thirty three percent of the patients in their study had advanced degrees.

On the same aspect of marital status, more than fifty percent of the sample was unmarried. It may be related to the stigma of schizophrenia that impacts as well as deters men as well as females from marriage. Because of the debilitating fact of the illness, those who have it find it difficult to establish, sustain, and have close relationships, particularly with men. This finding concurs with **Zaki, Sayed, & Ahmed's (2018)** findings that about three-quarters of the subjects under study were single. At the same line, **Wang et al. (2021)** they reported that somewhat less than fifty percent of the sample under study was unmarried.

Concerning to working condition, the actual study demonstrated that; almost two third of studied subject were worked. This could be explained by work pressure may have a role in developing mental illness as well as the current financial pressures that force even psychiatric patients to work .This outcome is consistent with the findings of **(Vrbova et al ., 2018)** who mentioned that, more than fifty percent of the sample were worked .On the contrary, **(Guedes de Pinho, et al ., 2018)** mentioned that, greatest percent of the sample were not worked. This may be contributed to alteration of the cultural.

In terms of the length of disease, almost fifty percent of the group under study had the condition for less than a year. This may be difficulties in accurately diagnosing schizophrenia, especially in the early stages. Symptoms of

schizophrenia can be subtle and may be mistaken for other mental health conditions, leading to delays in diagnosis **(Hall, 2024).** According to **Barlati et al. (2022),** around fifty percent of the patients' illnesses lasted less than a year. Contrary to these results, **Ageeb (2021)** found that sixty-six percent of the samples had the disorder for above ten years.

Additionally, the present research showed that nearly fifty percent of the participants had history of hospitalizing two times. Lack of familial and financial support, together with medication non-adherence following discharge, may be the cause of this. This finding is in context with **Machado et al.'s (2021)** revelation that more than fifty percent of the patients had been hospitalized one to two times in the course of three months in hospitals of psychiatric patients. In comparison, this finding differs from **Guo et al. (2018),** who displayed that fifty percent of schizophrenic patients had below three times psychiatric hospital admissions because of receiving drug therapy.

Regarding attachment styles, the findings of the present study generally showed the most of the patients under investigation had insecure attachment styles. The avoidant form was more common among patients with insecure attachment, followed by the anxious type. This may be due to a childhood trauma that is connected with a high risk for schizophrenia-spectrum psychosis. Also, a variety of early negative events, including separation between parents, ignoring, exposure for physical or sexual abuse, and/or initially an undesired child, are associated with schizophrenia. An inner working model of oneself and others may evolve mala adaptively as a result of these early adverse experiences, which can disrupt the formation of early secure attachment bonds.

These findings were consistent with **Saad et al. (2021)** reported that about more than fifty percent had an avoidant style while slightly less than fifty percent had an anxious style. In the same line, **França, et al. (2020)** reported that less than fifty percent of schizophrenic patients presented a secure attachment. Indeed, according to **Herstell et al. (2021),** the greatest percent of the schizophrenia patients in the study were categorized as having an avoidant attachment style. Also, **Chatziioannidis et al. (2019**) reported that the greatest percent of patients exhibited insecure attachment, with avoidant type being most common, while only twelve percent presented secure attachment.

On the other hand, the present results indicated that above three quarters of sample had moderate reality impairment. According to these findings, people with schizophrenia primarily lacked the capacity to develop concepts, judge others, think abstractly in many contexts, and appreciate their ideas and sentiments of others. Furthermore, chronic recall errors in forecasting or deficiencies in learning based on predictive perception are examples of persistently flawed hierarchical temporal processing. These deficiencies have been mirrored in those patients' symptoms of reality distortion (delusions, mental disorders, and hallucinations).

According to **Saad et al. (2021),** the schizophrenia patients in the research had moderate to severe impairments in reality-testing. Also, the entire scale of reality-testing impairment, around sixty-six percent of the schizophrenia patients under study had a fair level, thirty three percent had a severe level, and only roughly four percent had a mild level. Another research carried out by **McCutcheon et al. (2020),** who claimed that people with schizophrenia experienced higher disruptions in reality testing as opposed to other clinical teams.

Regarding the insight levels of the sample, the actual findings indicated that less than fifty percent of the sample had low insight. This could be attributed to certain factors, mainly cognitive impairments, including deficits in executive functioning, memory, and attention, which can impact insight. Difficulties in processing and integrating information can obstruct the ability to known and understand symptoms of one's own illness. Adding to that, the positive symptoms (as hallucinations) and negative symptoms (as social withdrawal) in schizophrenia which distort judgment, leading to impaired insight.

Indeed, delusions can contribute to a lack of awareness of illness. Also, social stigma, lack of social support, or negative attitudes toward mental illness can impact insight. This result is in line with **Sagayadevan et al. (2019),** who cleared that individuals with schizophrenia reported lower self-reflectiveness scores compared to those with anxiety disorders. This was in concordance with the findings of **Tezenas du Montcel et al. (2019)**, which proved that slightly less than fifty percent of patients studied were considered unaware of their schizophrenic diagnosis. Moreover, **Lopez-Morinigo et al. (2020)** reported that nearly seventy-five percent of patients had impaired cognitive insight. In the same line, **Kim et al. (2020)** reported that close to sixty-six percent of patients experience moderate-to-severe impairment. However, this outcome differs from that of **Sharma et al. (2019)** who discovered that near to fifty percent of the sample had good insight.

Concerning the correlation between reality impairment and insight, the actual study revealed that there was a negative correlation between reality testing impairment and insight. This his outcome may be the consequence of both positive as well as negative symptoms of schizophrenia, which are caused by deficiencies in the brain's frontal cortex and cortical midline region, which may also be the cause of insight processing. In fact, poor insight is associated with non-adherence to antipsychotic drugs, which is the significant hazard factor for the recurrence of psychosis. Furthermore, a disintegrate in the resilience elements that prevent the formation of psychosis may be a more accurate way to conceptualize impaired insight than as a direct predictor of transition **(Forsyth and Bearden, 2023).**

Numerous studies have evaluate the relation between insight as well as psychotic symptoms that reflect impaired reality testing, particularly in schizophrenia. **Penney et al. (2019)** reported that disintegrate Serious symptoms, such delusions, are accompanied by a lack of understanding or the incapacity to analyze such ideas. As a result, people with different levels of cognitive insight who may also experience extreme hallucinations and delusions may also realize that their beliefs are probably the result of sickness. Moreover, **Mosolov & Yaltonskaya, (2022)** confirmed that positive as well as negative symptoms are prevalent in patients with a lack of insight and agree with these outcomes.

Also, **Kim et al. (2020)** reported that insight was linked to two positive as well as negative symptoms "p value equal 0.001". Additionally, **De Avila et al. (2019)** claimed that weak insight is frequently related with intellectual cognitive poverty, and it may reduce the ability of evaluating reality, despite facts to the contrary. In the same line, **Subotnik et al. (2020)** found that bad insight was

moderately connect with reality distortion as well as positive symptoms, including hallucinations and delusions.

Regarding the relationship between insight and attachment types, it was found that insight and style of attachment were positively correlated. This outcome might be because individuals with secure attachments shown greater insight than those with insecure attachments. Theoretically, individuals who have a secure attachment style may find it easier to go through this process since they are more inclined to ask for assistance and trust others. Furthermore, fostering socialization and an active social life through a stable connection may indirectly help people perceive the mental illness and its need for treatment more clearly, leading to improved understanding.

In parallel to actual expectations, **Franca et al. (2020**) discovered a significant bad relation between avoidant attachment and insight scale scores. According to the same author, insight and the subscale anxiety were positively correlated ($p < 0.05$). Secure attachment and insight scale scores did not significantly correlate, which is in contrast to the actual finding (**Pusuroglu et al., 2022**). Additionally, a moderator of psychotic symptoms could be decreased insight, which is frequently observed in the context of insecure attachment, according to **Armando et al. (2019).**

Conclusion:

It can be concluded from the actual study's results that the majority of schizophrenia patients exhibited impaired insight, insecure attachment, and reality testing impairments. Additionally, there was a positive correlation between insight score and attachment. Furthermore, there was a negative correlation between insight score and reality testing impairment.

Recommendations

The results of this research allow for the deduction of these recommendations:

For patients with schizophrenia, a psycho-educational program is advised in order to improve insight and lessen reality impairment. Also, involving families in educational sessions to improve attachment insecurities and create a supportive environment. Furthermore, to understand more about the connections between insight, attachment, and reality testing in schizophrenia spectrum disorders, more expansive sample sizes are needed for future research.

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