



Attachment Styles as Indicators of Positive and Negative Symptoms in Patients with Schizophrenia

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ABSTRACT

The objective of the present study was to investigate the association and contribution of insecure attachment styles i.e. avoidant and anxious attachment styles with positive and negative symptoms of psychosis in patients with schizophrenia. The sample comprised of 120 patients with schizophrenia aged 24-50 years ($M= 36.71$, $SD=9.8$). The measures administered along with Semi Structured Interview Form, included: Positive and Negative Syndrome Scale (PANSS) (Kay et al., 1987) and Revised Adult Attachment Scale (Collins & Read, 1990). The results of regression analyses revealed both insecure attachment styles i.e. avoidant and anxious attachment as significant predictors of positive and negative symptoms of schizophrenia. These findings signify the insecure attachment as risk factor for the symptomology of schizophrenia. Limitations and implications of findings were discussed.

Keywords: Avoidant attachment, Anxious attachment, Schizophrenia

INTRODUCTION

Schizophrenia is highly disabling psychiatric illness characterized by positive symptoms (e.g. hallucinations and delusions), negative symptoms (e.g. anhedonia, alogia) and cognitive symptoms including impaired executive functioning. Schizophrenia is affecting 1% of global population and considered as top 10 causes of global disability (Marder & Cannon, 2019). Although the exact prevalence of schizophrenia is unknown in Pakistan but according to "Assessment of Health Status & Trends in Pakistan" approximately it is affecting 1-2% of the total population

(Department of Community Health Sciences, Aga Khan University, 2001) Onset of schizophrenia usually occurs during late adolescence and early adulthood. It affects both men and women equally but in some cases it occurs later in women than men (Goldner et al., 2002). Several factors are evidenced to contribute in the development of disorder including genetic, psychological and environmental factors (Hilker et al., 2018)

There is mounting evidence that early childhood traumas such as sexual abuse, being in foster care, or homelessness are associated with an increased risk of developing psychosis (Morrison et al., 2003; Trotta et al., 2015). These experiences are known to influence the development of attachment styles of an individual (Harder, 2014) which ultimately are associated with increased symptoms of psychosis both clinical and non-clinical samples (Barker et al., 2015; Carr et al., 2018; Korver-Nieberg et al., 2014; Lavin et al., 2020)

The concept of attachment style has been originated from John Bowlby's attachment theory (Bowlby, 1969/1982). The theory postulates that one's interpersonal relating style and his ability to regulate emotions develop as a result of his early experiences with one's primary caregiver. The theory also posits that these early experiences have significant impact on later interpersonal relationships throughout life. As children form their internal working model of relationships derived from their early experiences and these models guide child's emotions, thoughts and behaviors in later relationships. Theory also postulates that attachment system also work as protection seeking mechanism to protect individual from external threats (Bowlby, 1969, 1984; 1988).

Bowlby's attachment theory was further expanded by Mary Ainsworth, a developmental psychologist. He identified four different types of attachment styles including secure attachment style, anxious- ambivalent (insecure) attachment style, avoidant (insecure) attachment and disorganized attachment. In *secure attachment styles*, children may feel distress when their caregiver departs, but they are able to cope because they are certain that their caregiver will return. They have experienced it with their primary caregiver who is responsive, available and sensitive to their needs. *Anxious-ambivalent (insecure) attachment* develops when there is inconsistent availability of primary caregiver and results in children becoming extremely distressed when caregiver leaves them and experience ambivalence when they return. In *avoidant Attachment style*, children may avoid their caregiver and don't get emotional or distressed when their caregiver leaves and returns. *Disorganized Attachment* is characterized by an absence of clear attachment behavior towards their caregiver. Children's behavior is often seems confused or apprehensive in the presence of a caregiver (Ainsworth, 1978).

Childhood attachment styles are evidenced to have an impact on how people function as adults by influencing how they handle stress, manage emotions, and approach relationships. Anxious attachment style manifests as heightened emotional expression and reduced sense of autonomy in adulthood resulting in increased dependence on others. Individuals with avoidant attachment over regulate their

emotions and avoid close relationships in adult life since they were rejected by caregivers, particularly when they showed signs of distress (Main & Solomon, 1990; Mikulincer & Shaver, 2013).

A large body of research document that attachment styles increases the risk of developing psychopathology (Mikulincer & Shaver, 2012; Wearden et al., 2000; Trucharte et al., 2022). Attachment patterns in schizophrenia have constantly drawn significant research attention (Berry et al., 2007; Carr et al., 2018; Murphy et al., 2020; Read & Gumley, 2008). Empirical researches demonstrate the link between both insecure attachment styles i.e. avoidant and anxious attachment styles to be associated with positive and negative symptoms of schizophrenia (Berry et al., 2007; Carr et al., 2018; Gaber et al., 2025; Helyel & El-Sayed, 2025).

Nonetheless, there are some contrary evidences as well. Some studies suggest avoidant attachment style as a risk factor for only positive symptoms (Korver-Nieberg et al. 2014; Korver-Nieberg et al. 2015) particularly paranoia (Berry et al., 2008; Murphy et al., 2020). Other studies demonstrate avoidant attachment style to be linked to negative symptoms (Berry et al., 2008; de With et al., 2025; Ponizovsky et al., 2007). Pertaining to anxious attachment styles, studies evidenced it to be linked only to positive symptoms of schizophrenia (Kayetal, 1987; Ponizovsky et al., 2007).

To sum up, a review of the extant literature suggests an inconsistent pattern of the association between avoidant and anxious attachment styles and positive and negative symptoms of schizophrenia. These observed patterns are from Western studies. There is scarcity of studies in context of Pakistani culture. Envisaging this gap in existing literature, the present study is an endeavor to examine the association and contribution of insecure attachment styles i.e. avoidant attachment style and anxious attachment style with positive and negative symptoms of schizophrenia. The obtained findings will not only help to understand the specific role of insecure attachment styles in our cultural context but also will aid in development of therapeutic strategies grounded on obtained findings for patients with schizophrenia.

METHOD

Participants

The sample of present study comprised of 120 patients with schizophrenia (60 males & 60 females) with an age range of 24 to 50 years ($M= 36.71$, $SD=9.8$). They were diagnosed by the Psychiatrist and Clinical Psychologist according to the diagnostic criteria given in Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition, Text Revision (DSM-5-TR; (American Psychiatric Association, 2022). The sample was recruited using purposive sampling technique from different government and private hospitals in Karachi. The educational level of participants was at least middle school to ensure Urdu or English proficiency. Individuals with comorbid psychological disorders (i.e. drug induced psychosis and bipolar disorders etc.) as well as medical conditions (i.e. neurological disorders and intellectual developmental disorders) were excluded. Table 2 presents the demographic

characteristics of participants.

Measures

Semi Structured Interview Form

Detailed personal and clinical information of entire sample was recorded by this qualitative measure designed by Institute of Clinical Psychology, University of Karachi based on Diagnostic and Statistical Manual for Mental Disorder. It usually takes 20 to 30 minutes to administer individually on participants and also helps to screen out diagnosis. Its items focused on the domains including individual's demographic information, presenting problems, history of problem, medical history, family history, educational history, occupational and social history, recreational activities, sexual history, mental state examination, addiction, family psychopathology, gender identity problems, personality traits, psychosomatic complaints and behavior during interview.

Positive and Negative Syndrome Scale

The Positive and Negative Syndrome Scale (PANSS) (Kay et al., 1987) is used to measure positive and negative symptoms of schizophrenia. The PANSS has 30 items which are divided into three subscales i.e. positive, negative and general psychopathology. The items are rated using 7-point Likert type scale (*1=absent to 7=extreme*). The total score for subscales ranges from 7 to 49 for positive and negative subscales and 16 to 112 for general psychopathology. The composite subscales score is obtained by subtracting negative scores from positive scores and it ranges from -49 to +49, reflecting the degree of predominance of one syndrome in relation to the other. The present study has utilized only Positive and Negative subscales for which the obtained Cronbach's alpha values are .73 and .83 respectively.

Revised Adult Attachment Scale

The Revised Adult Attachment Scale was developed by Collins and Read (1990) comprising of three subscales, each composed of six items. The 5-point Likert type scale is used for rating the responses. The three subscales are named as close, depend, and anxiety. The close scale measures the extent to which a person is comfortable with closeness and intimacy. The depend scale measures the extent to which a person feels he/she can depend on others to be available when needed. The anxiety subscale measures the extent to which a person is worried about being rejected or unloved.

The scale also gives scores for three attachment styles: Secure attachment style (high scores on Close and Depend subscales, low score on Anxiety subscale), Anxious attachment style (high score on Anxiety subscale, moderate scores on Close and Depend subscales) and Avoidant attachment style (low scores on Close, Depend, and Anxiety subscales). The present study utilized the two subscales i.e. avoidant attachment styles and anxious attachment styles. The Cronbach's alpha obtained in the present study for avoidant attachment style is .79 whereas for anxious attachment style is .85 indicating satisfactory internal consistency.

Procedure

Research Approval was taken from the Advanced Studies and Research Board

(ASRB) of Institute of Clinical Psychology, University of Karachi. Followed by ethical approval was sought from Ethical Review Board of Institute of Clinical Psychology, University of Karachi. This study was performed as a component of the Ph.D Thesis. Entire clinical sample for present study was drawn from different government and private hospitals of Karachi, metropolitan city of Pakistan. Consent form illustrating the purpose and nature of present study was provided to the authorities of Psychiatry department of hospitals and later to the patients. After getting the permission, patients with schizophrenia diagnosed by psychiatrists and clinical psychologist were approached individually. Only those participants were included who gave consent through formal consent form. Firstly, researcher has taken detail diagnostic interview and recorded all the necessary personal and illness related information of participants on semi-structured interview form. Further, diagnosis made by psychiatrists and clinical psychologists was confirmed according to the diagnostic criteria of Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition, Text Revision (DSM-5-TR; American Psychiatric Association, 2022). After administration of semi- structured interview form, Positive and Negative Syndrome Scale (PANSS; Kay et al., 1987) and then Revised Adult Attachment Scale (AAS; Collins & Read, 1990) were administered. Throughout the administration process, participants were allowed to ask questions if they face any difficulty in understanding and following the instructions given by the researcher. At the end of the research procedure, concern authorities and participants were thanked for their valued time and cooperation.

Statistical Analysis

The statistical analysis was performed using the Statistical Package for Social Sciences (SPSS, v.27). Linear regression analysis was computed to test the hypotheses of the present study. Descriptive statistics (mean, standard deviations, frequencies and percentages) were also computed for the demographic variables of the study.

RESULTS

Table 1

Psychometric Properties of the Scale and Subscales

Scales	<i>M</i>	<i>SD</i>	<i>Range</i>	<i>α</i>
Avoidant Attachment Style	37.07	7.51	12-60	.79
Anxious Attachment Style	19.69	3.6	6-36	.85
PANSS –Positive Symptoms	20.70	4.8	7-49	.73
PANSS - Negative Symptoms	18.70	4.0	7-49	.83

Note: PANSS = Positive and Negative Syndrome Scale

Table 2

Descriptive Statistics for Participants' Demographic Characteristics (N= 120)

Variables	<i>F</i>	%
Gender		
Male	60	50
Female	60	50
Birth Order		
First Born	30	25.0
Middle Born	77	64.0
Last Born	11	9.2
Only Child	02	1.7
Marital Status		
Married	45	37.5
Unmarried	75	62.5
Family System		
Joint	45	37.5
Nuclear	75	62.5
	<i>M</i>	<i>SD</i>
Age	36.71	9.8

Table 3

Linear Regression Analysis with Avoidant Attachment Style as Predictor of PANSS Positive Symptoms and PANSS Negative Symptoms in Patients with Schizophrenia

Outcome Variables	<i>B</i>	<i>SE</i>	<i>B</i>	<i>R</i> ²	<i>F</i>	<i>Sig.</i>
Constant	15.09	2.20				
PANSS – Positive Symptoms	.14	.06	.22	.05	5.98	.02
Constant	10.03	1.68				
PANSS – Negative Symptoms	.23	.04	.44	.19	27.75	.00

PANSS = Positive and Negative Syndrome Scale

**p*<.05

Table 4

Linear Regression Analysis with Anxious Attachment Style as Predictor of PANSS Positive Symptoms and PANSS Negative Symptoms in Patients with Schizophrenia

Outcome Variables	<i>B</i>	<i>SE</i>	<i>B</i>	<i>R</i> ²	<i>F</i>	<i>Sig.</i>
Constant	12.74	2.35				
PANSS – Positive Symptoms	.42	.12	.31	.18	12.85	.00
Constant	14.12	2.01				
PANSS – Negative Symptoms	.23	.10	.21	.04	5.35	.02

PANSS = Positive and Negative Syndrome Scale

**p*<.05

DISCUSSION

The objective of the present study was to examine the association and contribution of insecure attachment styles i.e. avoidant and anxious attachment styles with positive and negative symptoms of schizophrenia. The obtained findings suggest some unique trends with regard to Pakistani culture context which are as followed:

The results suggest that avoidant attachment style explained 5% and 19% variance respectively in the score of positive and negative symptoms of schizophrenia (Table 3). Likewise, anxious attachment style explained 18% and 4% variance respectively in the score of positive and negative symptoms of schizophrenia (Table 4). Hence, avoidant and anxious attachment styles are observed as significant predictors of positive and negative symptoms of schizophrenia. These results signify insecure attachment styles as risk factors for positive and negative symptoms of schizophrenia. These findings are consistent with the group of studies in previous literature which have supported the association of avoidant and anxious attachment styles with positive and negative symptoms of schizophrenia (Berry et al., 2007; Carr et al., 2018; Gaber et al., 2025; Helyel & El-Sayed, 2025).

The obtained findings could plausibly be explained by attachment theory which holds that anxious and avoidant attachment styles lead to symptom severity of psychosis through affect dysregulation (Mikulincer & Shaver, 2012). As attachment patterns can alter the neuroendocrine stress regulation functions of the brain (Barker et al., 2015; Read et al. 2009). Individuals with avoidant attachment styles are prone to use deactivating strategies such as suppression which avert the expression and control of emotions. Individuals with anxious attachment style use hyperactivating

strategies such as catastrophising or rumination which exacerbate unpleasant emotions. Hence, these individuals may release higher level of stress hormone cortisol, whenever their attachment system is activated, for example if they get separated from close ones in adulthood (Mikulincer & Shaver, 2007). This affect regulation could explain the exacerbation of symptoms of psychosis as it increase the stress-vulnerability and maladaptive coping strategies which affect the onset, expression of positive and negative symptoms and recovery of an individual with schizophrenia (Barker et al., 2015; Carr et al., 2018; Korver-Nieberg et al., 2014)

In conclusion, the results of the present study are suggestive of the significant role of insecure attachment styles in amplifying positive and negative symptoms of psychosis in patients with schizophrenia in Pakistani society. These finding have significance for mental health professional as they emphasize the consideration of key etiological role of attachment styles in formulation of treatment intervention for schizophrenia for better prognosis. Given the paucity of evidence in this area, it may also be beneficial for researchers in the field to further examine the connection between insecure attachment styles and schizophrenia in future studies. The present study has certain limitations that needs to be considered later.

There are certain limitations to the current study that need be taken into account. Due to the unique clinical group with specific inclusion criteria, which were challenging to reach and obtain consent from, the study's findings have limited generalizability. As a result, the sample size is not as large as it may be. Therefore, in order to boost the power of generalization, future research may use a greater sample size with broader demographic characteristics.

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