Mediterranean Journal of Clinical Psychology

ISSN 2282-1619

MJCP

Volume 12, n 1, 2024

Clinical Psychology

Social support and attachment in persons diagnosed with psychotic spectrum disorders

*Philipp Stang [1], Martin G. Köllner [2], Maren Weiss [2]**

Abstract

Introduction: Individuals with diagnosed psychotic spectrum disorders often suffer from impaired social functioning and related additional adverse effects on an interpersonal relationship level, like a smaller social network or less social support compared to unaffected persons. This means additional negative psychological effects in an already challenging situation.

Materials and methods: Individuals with a diagnosed psychotic spectrum disorder (n = 24) were compared to a healthy adult control group (n = 145) on the German versions of the Interpersonal Relationships and Attachment Personality Inventory (Beziehungs- und Bindungs-Persönlichkeitsinventar; BB-PI; Andresen, 2012) and the Questionnaire on Social Support (Fragebogen zur sozialen Unterstützung; F-SozU; Fydrich et al., 2007).

Results: The clinical sample had a higher self-reported need for attachment, higher relationship insecurity, but also a higher trust in their attractiveness and ability to seduce other individuals. In addition, after correcting for age, affected individuals reported less social support on all sub-scales with the exception of the scales Social Integration and Satisfaction with Social Support. In additional analyses, among other results, protective effects of being in a dyadic romantic relationship emerged.

Conclusion: It is concluded that a diagnosed psychotic spectrum disorder goes along with specific interpersonal relationship styles and reduced social support. Social aspects should be an essential part of a successful therapeutic concept.

[1] Institut für Psychologie, UMIT Tirol, Eduard-Wallnöfer-Zentrum 1, 6060 Hall in Tirol, Austria

[2] Department of Psychology, SRH Wilhelm Löhe Hochschule, Fürth, Germany

E-mail corresponding author: maren.weiss@srh.de

Keywords:
Interpersonal relationships; Psychotic spectrum disorders; Relationship styles; Schizophrenia; Social support.

Received: 22 February 2024
Accepted: 15 April 2024
Published: 30 April 2024

Citation: Stang, P., Köllner, M.G., Weiss, M. (2024). Social support and attachment in persons diagnosed with psychotic spectrum disorders. *Mediterranean Journal of Clinical Psychology 12*(1). https://doi.org/10.13129/2282-1619/mjcp-4055

1. Introduction

Functioning interpersonal relationships are central to personal well-being and life satisfaction. Especially in difficult life situations, social support and a functioning social network can activate resources and buffer stress. Relationship qualities are also important for family

caregivers. For example, relationship quality and an optimistic attitude are important aspects for the mental well-being of mothers as caregivers of adults with schizophrenia (Greenberg et al., 2004).

The psychotic spectrum includes a variety of different diagnoses, such as schizophrenia, schizoaffective disorder, acute and transient psychotic disorder or delusional disorder. Schizophrenia is the prototypical psychotic illness. The risk of developing schizophrenia for women and men is around 1%. The first manifestations occur most frequently between adolescence and the age of 35 (Maß, 2001). People who suffer from a psychotic spectrum disorder need special support in order to cope with the various stresses caused by the disorder. At the same time, psychotic spectrum disorders are often accompanied by limitations in social functioning. In their longitudinal study over 20 years, Velthorst et al. (2017), for example, were able to show significant social limitations in people with a psychotic spectrum disorder. These social limitations are often recognizable early on, are relatively stable and are accompanied by a number of other limitations in everyday functioning (e.g., unemployment, assisted living environment). This often creates secondary suffering in an already stressful situation. Improving social functioning and social relationships could significantly increase the life satisfaction and quality of life of those affected.

1.1 Theoretical and empirical foundations

People with mental disorders often have a smaller social network, fewer social contacts, feel less socially supported and express less satisfaction with the social support they receive (Fydrich et al., 2007). This is all the truer for disorders of the psychotic spectrum: Bengtsson-Tops und Hansson (2001), for example, refer to the poorer social network in people with schizophrenia compared to a healthy sample. People who have an increased risk of a psychotic disorder have lower social skills, especially in situations associated with closer relationships and higher emotional involvement. They suffer more frequently from contact anxiety, fear of failure and criticism, and maintain fewer self-acquired relationships and fewer relationships with family members overall (Bailer & Hautzinger, 1993). Harley et al. (2012) found the average number of friends for individuals with schizophrenia and schizoaffective disorder to be 1.57. Men reported friendships less frequently than women. Co-patients were often named as friends. Stuke et al. (2020) also found interpersonal problems for patients with non-affective psychoses. Test persons with a potential "psychotic dilemma" were more likely to describe themselves as dominant, self-centered, cold and socially avoidant in their social relationships compared to the group without a "psychotic dilemma". The "psychotic dilemma"

(Mentzos, 2017) is a psychodynamic construct that describes the agonizing inner tension triggered by the conflict between "self-oriented" and "object-oriented" tendencies (Stuke et al., 2020). Wisman-van der Teen et al. (2022) point out that persons with psychotic disorders have a lower level of basic trust compared to healthy people and report less positive and more negative affect. However, social withdrawal did not differ from healthy individuals in the study.

The multi-centric study by Müller et al. (1998) indicates that although therapy and prophylaxis are able to effectively reduce relapses and rehospitalizations in people with schizophrenia (n = 364), the psychosocial situation continues to show considerable disadvantages. For example, half of the respondents with an average age of 35 years lived alone or with their parents. Older people with schizophrenia also exhibit lower social and societal integration than their peers without schizophrenia (Abdallah et al., 2009; Won & Solomon, 2002). Baer und Fasel (2009) also postulate that young people in particular are at risk of being excluded from working life following a psychotic crisis, which is associated with delayed recovery and a reduced quality of life. Baer und Fasel (2009) attribute this in particular to psychiatric and rehabilitative care and their often-separate orientation and approach and call for interdisciplinary and long-term support as well as psychiatric services for employers.

Velthorst et al. (2017) examined the trajectories of social functions in persons with a diagnosed psychotic spectrum disorder over a period of 20 years. Relatively stable courses of social functioning were found, and around half of the sample showed consistent and severe impairments in social functioning. Pre-morbid social adjustment was a good predictor of social functioning during the course of the disorder. Patients with schizophrenia appeared to be more impaired in their social functioning than patients with other diagnoses from the psychotic spectrum. Sörgaard et al. (2001) report that female gender, membership in clubs and organizations, living in urban compared to rural areas, regular contact with family, and a higher global functioning level predicted social integration in persons with schizophrenia. Distal support (everyday, informal interactions and support) in public life is the focus of Wieland et al. (2007). A higher level of distal support leads to a higher quality of life satisfaction and a greater sense of belonging. Moreover, the use of day-structuring services is linked to perceived social integration (Kilian et al., 2001).

On the other hand, sexual assault, verbal and physical abuse, and domestic violence are associated with psychopathology and severe mental disorders including psychotic disorders (Afe et al., 2016; Tasa-Vinyals et al., 2020).

Xanthopoulou et al. (2022) suggest that the causes of social isolation of people with psychosis in the UK include institutional factors (e.g., impact of hospitalization), symptoms of illness (e.g., paranoia), and stigma (e.g., the label "psychosis"). In this context, Stuart und Arboleda-Flórez (2001) found that individuals who have less knowledge about schizophrenia are more likely to distance themselves from people with schizophrenia. In particular, people over the age of 60 years were less informed or educated on the subject and were therefore more likely to distance themselves socially. In general, however, the authors found that most respondents were relatively well informed overall and had a progressive understanding of schizophrenia and its treatment.

Due to the complexity, severity, and associated necessary treatment time and effort of psychotic disorders, the topic of relationships and sexuality has long been neglected in psychiatric research or only considered in the context of the side effects of antipsychotics. Augustin et al. (2011) therefore explored the psychological and socio-psychiatric aspects of the love life, sexual experience and behaviour of 40 patients with psychotic disorders and 40 control participants using a standardized and semi-structured interview on sexual anamnesis. The results showed that study participants with a psychotic disorder differed from the control participants in that they generally had fewer active impulses towards sexual activity and a less positive attitude towards partnership and sexual issues. However, if they were able to maintain stable relationships or be sexually active before the illness, this represented a prognostically positive factor for relationship skills and sexual activity after the initial manifestation and in the further course of the illness. This is consistent with the findings of Hell und Fürer (1987), who postulate a favorable prognosis for patients with schizophrenia based on stable relationships, especially for social and occupational skills. According to Augustin et al. (2011), when individuals with a psychotic disorder were in a stable relationship, they did not differ from control participants in terms of sexual interest, sexual activity and sexual satisfaction. Hinz et al. (2010) were also able to prove that the existence of a relationship in individuals with a psychotic disorder has a positive effect on the life satisfaction of patients, while parenthood, for example, does not directly influence satisfaction. At the same time, it can be assumed that the parenthood rate is lowered by the presence of a psychotic disorder (Grube & Dorn, 2007). Nyer et al. (2010) also identified marriage or a relationship as a protective factor, with individuals with a psychotic disorder in a relationship showing a later onset of psychotic episodes or hospitalizations, a higher quality of life and fewer suicidal thoughts compared to divorced, widowed or separated individuals.

In summary, the current state of research shows some findings on social integration and the importance of social relationships in connection with psychotic disorders. In order to provide optimal support for those affected, a holistic approach that also takes into account partnership and sexual aspects is required. This study therefore focuses on two aspects of social functions: Social support and relationship and attachment personality. Perceived social support takes into account not only the social network, but above all the subjective experience of a person (Fydrich et al., 2007). The relationship and attachment personality comprises "personality traits that are related to love and partnership relationships in the narrower sense, including various partner-related attachment concepts" (Andresen, 2012, S. 22; translated by author team) and is therefore not related to a specific partnership, but to long-term individual characteristics and relationship experiences. Referring to attachment theory, a secure attachment style (Ainsworth et al., 2015; Bowlby, 1969, 1988, 2008) appears to be associated with low psychotic symptoms (Gizdic et al., 2020; Korver-Nieberg et al., 2014). Insecure attachment styles are more common in people with psychotic disorders (Chatziioannidis et al., 2019; França et al., 2020; Gumley et al., 2014; Herstell et al., 2021; Kvrgic et al., 2012; Monfort-Escrig & Pena-Garijo, 2021; Pearce et al., 2017; Ponizovsky et al., 2007; Wickham et al., 2015).

1.2 Hypotheses

The aim of the study is to record the social support and relationship patterns of persons affected by psychotic spectrum disorders. Based on this data, support options and support concepts are to be developed.

The study was preregistered with "as predicted" (www.aspredicted.org, 114323). The following hypotheses are being investigated:

H1: Individuals with psychosis are more restricted in social attachment than individuals from the general population.

H2: Individuals with psychosis experience less social support than individuals from the general population.

H3: Individuals with psychosis have below-average scores on the scales for social attachment and social support compared to the standardization samples, whereas individuals from the general sample have average scores.

H4: Individuals with a diagnosis of schizophrenia are more restricted in their social attachment and their social support than individuals with a different psychotic diagnosis.

H5: Individuals in a partnership are less restricted in their social attachment and social support than singles. Exploratory analyses should examine whether the existence of a partnership can compensate for social restrictions resulting from a diagnosis from the psychotic spectrum.

Exploratory analyses were originally also intended to correlate symptom severity and treatment history with social support and social relationship management. Due to the small sample size achieved and the low variance in the responses, these exploratory analyses could not be carried out as planned.

2. Materials and Method

The study was designed as an online survey from November 2022 to October 2023. The survey was organized using the survey software Lime-Survey (https://www.limesurvey.org/de). The survey link for the clinical sample was distributed by regional cooperation partners in practices and hospitals as well as by the Chamber of Psychotherapists and the outpatient clinics of the state-recognized training institutes in accordance with the Psychotherapist Act (PsychThG). In addition, patients in an inpatient facility for individuals with psychotic disorders were personally approached and asked to participate. The data was collected fully anonymized. The inclusion criteria were that a participant had a diagnosis of psychosis with corresponding symptoms and sufficient German language skills and cognitive ability to complete the questionnaire. Exclusion criteria included being underage, not having a diagnosis from the psychotic spectrum, lacking language skills and insufficient cognitive capacity to complete the questionnaire, for example due to strong negative or positive symptoms. A comparison sample from the general population was surveyed at the same time to make it easier to classify the results. This sub-sample was recruited via a research seminar for psychology students at the authors' institution.

2.1 Sample

The sample consisted of a total of 169 people, n = 24 of whom had a diagnosis from the psychotic spectrum and n = 145 were healthy control participants. Participants were between 18 and 72 years old (M = 27.66, SD = 11.32 years). 66% of the sample was female and 34% male. See Table 1 for more detailed demographic data.

2.2 Survey instruments

Both subsamples completed questions on demographic data (age, gender, marital status, number and duration of lifetime intimate partnerships, number of children, level of education, employment status, nationality, native language). The clinical subsample also provided

information on the disorder and treatment history (diagnosis, age at first diagnosis, current and previous treatments, perceived limitation due to the diagnosis). In order to heighten participation rates, answers on questions concerning disorder and treatment history were not mandatory.

Social support was measured using the established "Questionnaire on Social Support" (Fragebogen zur sozialen Unterstützung; F-SozU) by Fydrich et al. (2007). It conceptualizes social support as perceived or anticipated support from the social environment using 54 items. The present study uses 38 items from the scales "Emotional support", "Practical support", "Social integration", "Availability of a trusted person", and "Satisfaction with social support". The items are in statement form (e.g. "I have friends/relatives who are good listeners when I want to talk"). Study participants indicate their level of agreement with these statements on a five-point Likert scale. The internal consistencies (Cronbach's alpha) of the main scales and the total score are between $\alpha = .81$ and $\alpha = .93$. The F-SozU fulfills the classic test quality criteria very well and allows the values to be compared with various norm samples.

Social relationship management was assessed using the Relationship and Attachment Personality Inventory (Beziehungs- und Bindungs-Persönlichkeitsinventar; BB-PI) by Andresen (2012). This questionnaire records aspects of personality that are relevant for relationships, partner choice and partnership on the basis of eight domains (1L: Love, eroticism and understanding; 2S: Sexuality, adventure and desire; 3U: Insecurity, disappointment, and doubt; 4D: Dominance, contentiousness and aggressiveness; 5B: Attachment, need for closeness and dependence; 6V: Seduction, charm and attractiveness; 7T: Fidelity, morality, and constancy; 8M: Market orientation, entitlement, and pride) with a total of 144 items. The wording of the items is "across partnerships", i.e. the experience and behaviour in partnerships is surveyed in general and no reference is made to a current partner. The eight BB-PI scales show very good consistency values (Cronbach's alpha) with a range of .86 to .92. This questionnaire also fulfils the classic test quality criteria very well. Norm data from a non-representative general population sample are available to classify the results. The use of psychometric instruments in schizophrenia research can be regarded as expedient (Maß, 2001).

2.3 Data protection and ethics

Participation was voluntary and respondents actively agreed to participate by confirming "I have read the study information and agree to participate" before starting the survey. The data was collected anonymously. Participants were informed in detail about the project (e.g.,

persons conducting the survey, purpose of the survey, type of data collected, legal basis for data processing, data protection officer). Respondents were able to discontinue their participation at any time without detrimental consequences and could also request that their data be deleted retrospectively.

Two amazon vouchers of 50 euros each were raffled off among all participants; the collection of contact data for this raffle was strictly separate from the processing of the questionnaire. At no time could the contact details be linked to the questionnaire data.

The stress caused by completing the questionnaire did not exceed everyday stress. According to the self-assessment of the Joint Ethics Committee of Bavarian Universities (Gemeinsame Ethikkommission der Hochschulen Bayerns [GEHBa], 2022), no risks or harm were to be expected for the participants as a result of taking part in the survey. In addition, the basic ethical principles of the professional psychological associations DGPs and BDP were adhered to in the research project.

3. Results

3.1 Descriptive data

Table 1 compares the two sub-samples. As the clinical sample was significantly older than the comparison sample, age was included as a covariate in further statistical analyses. With regard to other socio-demographic variables (gender, native language, partnership), the two subsamples were comparable.

Table 1. Sample comparisons

	Clinical sample (*n* = 24)	**Control sample (*n* = 145)**	**Test statistics**
Age in years (*M*(*SD*))	36.70 (12.48)	20.20 (10.46)	$t(df = 164) = 4.34^{***}$
Sex (percentage male)	41 %	32 %	Chi-square (df = 1) = 0.62
Native language (percentage German)	88 %	90 %	Chi-square (df = 1) = 0.18
Relationship status (percentage currently in a relationship)	58 %	74 %	Chi-square (df = 1) = 2.42

Of the clinical sample, n = 17 individuals provided more detailed information on their diagnosis. According to this information, n = 9 individuals had schizophrenia, n = 8 individuals named another psychotic disorder (e.g., schizoaffective psychosis, psychotic depression). On average, the current symptom severity was reported as low (M = 1.8, SD = 0.79, scale 1 = "not at all" to 5 = "very severe").

All respondents in the clinical subsample stated that they had been receiving treatment for their diagnosis. The most frequent treatment options were pharmacological treatment (90 % of cases, n = 17) and inpatient hospital treatment in a psychiatric, psychotherapeutic or psychosomatic clinic (74 % of cases, n = 14). Experience of treatment in a psychiatric/psychosomatic outpatient clinic and the social psychiatric service were each experienced by 42% of cases (n = 8). 37% of cases (n = 7) had undergone outpatient psychotherapy. 32% of cases (n = 6) had experience with a day clinic, a therapeutic residential group or a nursing home. 21% of cases (n = 4) had experience with a self-help group and psychosocial counselling centers. 11% of cases (n = 2) have had experience with sociotherapy or digital health applications ("therapy app").

3.2 Hypotheses testing

3.2.1 Social attachment

In the multivariate analysis of variance, there was a significant effect of the diagnosis from the psychotic spectrum on overall social attachment ($F(8, 143) = 4.31$, $p < .001$). At the scale level, there was a significant effect of the diagnosis from the psychotic spectrum on Clusters 3 ("Insecurity, disappointment and doubt"), 5 ("Attachment, need for closeness and dependence") and 6 ("Seduction, charm and attractiveness"). The characteristics of the clusters mentioned are higher in the clinical subsample. People with a psychotic disorder therefore reported a higher level of attachment insecurity with a simultaneous high need for attachment and high own belief in their ability to seduce others. With regard to the other clusters (Love, Sexuality, Dominance, Fidelity, Market orientation), however, the group differences were not significant. Age was not significant as a covariate ($F(8, 143) = 1.59$, $p = .13$). Overall, the mean values of both subsamples with T-values between 40 and 55 are within the normal range of the BB-PI (Andresen, 2012). Table 2 compares the relationship and attachment factors of the two sub-samples.

Table 2. Relationship and attachment factors

	Clinical sample (*n* = 21)	**Control sample (*n* = 132)**	***F*(*df* = 1)**
Love	*M* = 68.57 (*SD* = 20.10) Norm value *T* = 45	*M* = 67.89 (*SD* = 16.11) Norm value *T* = 40	0.23
Sexuality	*M* = 50.62 (*SD* = 19.01) Norm value *T* = 45	*M* = 52.08 (*SD* = 17.23) Norm value *T* = 50	0.01
Insecurity	*M* = 48.00 (*SD* = 19.42) Norm value *T* = 55	*M* = 36.30 (*SD* = 14.31) Norm value *T* = 45	9.01**
Dominance	*M* = 38.33 (*SD* = 15.36) Norm value *T* = 50	*M* = 33.05 (*SD* = 13.41) Norm value *T* = 45	2.24
Attachment	*M* = 52.29 (*SD* = 19.39) Norm value *T* = 50	*M* = 45.36 (*SD* = 14.70) Norm value *T* = 45	6.30*
Seduction	*M* = 49.14 (*SD* = 18.75) Norm value *T* = 50	*M* = 41.50 (*SD* = 13.82) Norm value *T* = 45	7.15**
Fidelity	*M* = 59.14 (*SD* = 17.82) Norm value *T* = 45	*M* = 58.91 (*SD* = 15.08) Norm value *T* = 45	0.04
Market orientation	*M* = 49.29 (*SD* = 16.78) Norm value *T* = 45	*M* = 50.35 (*SD* = 15.51) Norm value *T* = 45	0.27

Note. Norm group = Total sample (Andresen, 2012)

3.2.2 Social support

On all scales of the F-SozU (Fydrich et al., 2007), people with psychotic disorder experience less social support when viewed descriptively. Taking age into account as a covariate ($F(df = 5, 153) = 3.91$, $p = .002$), the multivariate analysis of variance revealed a significant effect of a diagnosis from the psychotic spectrum on social support ($F(df = 5, 153) = 4.40$, $p < .001$). At scale level, there was a significant effect of a diagnosis from the psychotic spectrum on practical and emotional support and the presence of a trusted person. With regard to social integration and satisfaction with social support, however, the group differences were not significant. Table 3 compares the social support factors of the two sub-samples.

Table 3. Social support factors

	Clinical sample (*n* = 23)	**Control sample (*n* = 137)**	***F*(*df* =1)**
Practical support	*M* = 3.31 (*SD* = 1.05) Norm value PR = 19	*M* = 4.01 (*SD* = 0.65) Norm value PR = 49	10.43**
Emotional support	*M* = 3.76 (*SD* = 0.71) Norm value PR = 33	*M* = 4.20 (*SD* = 0.61) Norm value PR = 53	5.36*
Social Integration	*M* = 3.29 (*SD* = 0.64) Norm value PR = 25	*M* = 3.61 (*SD* = 0.63) Norm value PR = 40	2.55
Satisfaction with social support	*M* = 3.20 (*SD* = 0.92) Norm value PR = 48	*M* = 3.50 (*SD* = 0.80) Norm value PR = 56	2.14
Trusted person	*M* = 3.86 (*SD* = 0.87) Norm value PR = 28	*M* = 4.48 (*SD* = 0.63) Norm value PR = 43	13.42***

Note. Norm group = total sample (Fydrich et al., 2007)

With percentile ranks between 19 and 56, all values of the clinical and comparison subsample are within the average range of the population. This means that although there are highly significant differences between the groups and the clinical subsample has significantly lower values than the comparison sample, particularly on the scales "Practical support" (PR = 19) and "Trusted person" (PR = 28), none of the values are in a conspicuous (PR between 3-15 or 85-97) or very conspicuous (PR < 3 or > 97) range.

3.3 Subgroup comparisons: Diagnosis and partnership.

Due to the small sample size (exact diagnosis was only stated by *n* = 17 people, of which schizophrenia: *n* = 9, diagnosis of other psychotic disorder: *n* = 8), hypothesis 4 can only be tested descriptively and exploratively. On most scales, the values of the two diagnosis groups were comparable (deviation < 1 *SD*). On the BB-PI scales "Love" and "Insecurity", however, lower values were found in the "Schizophrenia" diagnosis group (deviation approx. 1 *SD*). Table 4 compares the social support factors and relationship and attachment factors of the two sub-samples.

Table 4. Social support factors and relationship and attachment factors

	Schizophrenia (*n* = 9)		Other psychotic disorder (*n* = 8)	
	M	*SD*	*M*	*SD*
F-SozU				
Practical support	3.12	1.16	3.06	0.99
Emotional support	3.67	0.85	3.63	0.44
Social Integration	3.18	0.61	3.31	0.72
Satisfaction with social support	3.10	0.87	3.18	1.26
Trusted person	3.83	1.10	3.59	0.57
BB-PI				
Love	59.63	27.80	75.14	9.94
Sexuality	43.50	22.77	49.86	16.91
Insecurity	38.25	20.80	57.43	19.48
Dominance	35.88	15.92	31.29	5.09
Attachment	45.13	22.41	53.00	19.11
Seduction	45.63	20.49	48.86	21.11
Fidelity	50.50	23.65	63.00	9.47
Market orientation	44.63	22.01	54.29	14.33

A current partnership proved to be relevant both for social relationship management (BB-PI, $F(8, 143) = 6.60$, $p < .001$) and for social support overall (F-SozU, $F(5, 153) = 3.29$, $p = .008$). Specifically, people in a partnership reported significantly lower scores on the BB-PI scale "Insecurity" ($M(SD)_{\text{Partner}} = 35.27\ (13.57)$, $M(SD)_{\text{Single}} = 44.88\ (18.33)$; $F(df = 1) = 12.99$, $p < .001$) and higher scores on the BB-PI scale "Loyalty" ($M(SD)_{\text{Partner}} = 61.02\ (13.34)$, $M(SD)_{\text{Single}} = 53.45\ (19.01)$; $F(df = 1) = 7.70$ $p = .006$) and on the F-SozU scales "Emotional support" ($M(SD)_{\text{Partner}} = 4.21\ (0.60)$, $M(SD)_{\text{Single}} = 3.94\ (0.71)$; $F(df = 1) = 7.32$, $p = .008$) and "Trusted person" ($M(SD)_{\text{Partner}} = 4.50\ (0.60)$, $M(SD)_{\text{Single}} = 4.11\ (0.86)$; $F(df = 1) = 11.44$, $p < .001$).

However, a further two-factorial analysis of variance revealed no significant interaction effect of the factors "diagnosis from the psychotic spectrum" and "partnership" on the BB-PI ($F(8, 143) = 0.85$, $p = .560$) and F-SozU scales ($F(5, 151) = 0.82$, $p = .539$).

4. Discussion

This paper compares social support and social relationship management in individuals with a diagnosis from the psychotic spectrum to a sample from the general population. Previous research suggests limitations in social functioning in this patient group (Bengtsson-Tops & Hansson, 2001; Müller et al., 1998; Velthorst et al., 2017; Xanthopoulou et al., 2022). It was found that individuals with a diagnosis from the psychotic spectrum reported higher levels of attachment insecurity, disappointment and doubt with a simultaneous high need for attachment and their own belief in their ability to seduce others. Cluster 3 "Insecurity" describes dissatisfaction with previous relationships, a lack of trust in partners and feelings of disappointment (Wisman-van der Teen et al., 2022). Insecurity is also linked to fear of commitment. Andresen (2012) also finds that people with low levels of this scale have a resignation towards love and relationships. At the same time, the individuals with a diagnosis from the psychotic spectrum have higher scores on Cluster 5 "Attachment", which describes emotional attachment needs, clinging behavior, dependence on partners and less independence. The need for protection is more pronounced and there is a fixation on the partner in conjunction with obsessive thinking about the object. The higher values on cluster 6 "Seduction" in relation to the comparison sample can be understood as a high need for confirmation through conquests (Andresen, 2012). It remains to be seen to what extent this actually reflects a higher level of competence or activity in relation to seduction. However, the increased belief in one's own ability to seduce in individuals with a psychotic disorder could also be a symptom of the disorder or an artifact. In contrast to Augustin et al. (2011), no significant limitations were found in Cluster 2 "Sexuality" in our sample. As a cautious interpretation, these seemingly contradictory findings could be interpreted as reflecting the conflict between "self-oriented" and "object-oriented" tendencies (Mentzos, 2017; Stuke et al., 2020).

In terms of social support, there were limitations in terms of practical and emotional support and the presence of a trusted person which are in line with F-SozU results on persons with mental disorders (Fydrich et al., 2007). Persons with a diagnosis from the psychotic spectrum therefore reported less emotional closeness and also less help in everyday life than individuals from the general population. The absence of a trusted person should not be equated with the

absence of a relationship, as the majority of the clinical subsample were also in a relationship. As expected, the presence of a relationship had a positive effect on some of the scales on relationship management and social support (Hinz et al., 2010; Nyer et al., 2010). The question of whether a partnership can compensate for the limitations resulting from a diagnosis from the psychotic spectrum (Augustin et al., 2011) cannot be answered conclusively on the basis of our data: No statistically significant interaction effect was found in our data that would indicate such compensation; however, given the sample size in the clinical subsample, this could also be due to a lack of statistical power.

On a positive note, the mean values on the scales were all within the normal range of the BB-PI and F-SozU questionnaires in the clinical subsample. In addition, the individuals from the clinical sample did not feel less integrated (Wisman-van der Teen et al., 2022) and were not more dissatisfied with their social support than the individuals from the general population.

The present study does not provide any causal explanations for the specific differences between the group with and without psychotic disorders. For this purpose, various aspects regarding attachment styles can be used based on the current state of research (Chatziioannidis et al., 2019; França et al., 2020; Gizdic et al., 2020; Gumley et al., 2014; Herstell et al., 2021; Korver-Nieberg et al., 2014; Kvrgic et al., 2012; Monfort-Escrig & Pena-Garijo, 2021; Pearce et al., 2017; Ponizovsky et al., 2007; Wickham et al., 2015). Psychosocial dysfunctions can also be seen in the context of the psychotic dilemma (Mentzos, 2017; Stuke et al., 2020).

5. Limitations

Data collection in the context of an online study with detailed questionnaire instruments is challenging for individuals with moderate to severe symptoms and limited functioning. This is reflected in our very small sub-sample of individuals with a diagnosis from the psychotic spectrum, despite intensive advertising and a targeted invitation to participate. At the same time, the $n = 24$ people from the clinical target group who took part in the study are at least currently relatively stable, as reflected in their assessment of their current symptoms. It can be assumed that our findings are likely to overestimate the social function and integration of people with a diagnosis from the psychotic spectrum. The small clinical subsample also limits the statistical power of the analyses and originally planned subgroup analyses could not be carried out as planned.

6. Implications for practice and research

Although all values of the clinical sample in the results are within the norm range of the statistical comparison sample, individuals with psychotic disorders experience social support

significantly worse than study participants in the healthy control sample. In terms of practical implications, specific health care can expand the perceived practical and emotional support and install trusted persons in the network of people with psychotic disorders as well as increase social integration (Stain et al., 2012). According to Wieland et al. (2007), higher levels of distal support can lead to a higher quality of life satisfaction and a greater sense of belonging. Referring to Baer und Fasel (2009), interdisciplinary and linked psychiatric and rehabilitative care with long-term support services for social integration is therefore required.

For effective interventions, however, a holistic view of the social aspects and individual needs is necessary, e.g. in people with chronic schizophrenia, the heterogeneity of life organization should be taken into account (Kilian et al., 2001). There are also specific implications, for example with regard to the establishment of outpatient help for fathers with a schizophrenic disorder (Grube & Dorn, 2007). Interventions that influence fear of attachment and resignation towards love and relationships can offer effective starting points for individuals with psychotic disorders.

A high quality of relationship and an optimistic attitude for both sides - patients and carers - also appear to be a resource that has an influence on health (Greenberg et al., 2004). Based on the differentiated results, specific health care interventions should be developed and existing ones optimized, specified and evaluated. These should relate in particular to the factors of high attachment insecurity and need as well as social support.

In terms of a resource-oriented approach, however, it can be emphasized that patients with psychotic disorders can certainly exhibit social functions at certain stages of their disorder.

Concerning implications for future research, it can be stated that the present study had a small sample size due to the special target group and research question, combining existing psychotic symptoms on the one hand with sufficient linguistic and cognitive skills to complete the psychometric questionnaires on the other hand.

Therefore, the replication of the study with a larger sample size is required. In addition, efforts should also be made to motivate individuals with more severe symptoms to participate in the study in order to obtain a more realistic picture of psychotic stress patterns. Otherwise, there is a risk that the influences of psychotic disorders will not be reflected in the psychometric findings.

7. Conclusion

Overall, our results demonstrate that a diagnosed psychotic spectrum disorder goes along with specific interpersonal relationship styles and reduced social support. It may be beneficial to

routinely include social aspects and the identification of possible protective factors like being in a dyadic romantic relationship into psychotherapeutic concepts.

Ethical approval

The study complied with the Declaration of Helsinki. In addition, a pre-registration, the clarification of legal and ethical objections by the self-assessment of the Joint Ethics Committee of the Bavarian Universities (GEHB) and the Bavarian Chamber of Psychotherapists took place. In addition, the basic ethical principles of the professional psychological associations DGPs and BDP were adhered to in the research project.

Informed Consent Statement

Informed consent was obtained from all subjects involved in the study.

Data Availability Statement

Access to the data is only possible under data protection restrictions. The type and scope of use are determined by the data providers and monitored by SRH Wilhelm Löhe University of Applied Sciences. An individualized contract between data providers and subsequent users is required. The data is classified as particularly sensitive as it is patient data.

Conflict of interest statement

There are no conflicts of interest.

Funding

The study was funded by the Alfred-Golombek-Foundation Nuremberg.

Acknowledgments

We would like to thank Jared Jahnel and Lara-Jo Salmen for their support in literature research, data collection and data processing. We would also like to thank all participating institutions for their support in recruiting the clinical subsample.

Authors' Contribution

PS: Conceptualization (equal); designed the study, funding acquisition (equa); investigation (equal); wrote the associated preregistration recruited participants and wrote the manuscript, writing - review and editing (equal).

MGK: Conceptualization (equal); funding acquisition (equal); investigation (equal); recruited participants; refined the manuscript, writing - review and editing (equal).

MW: Conceptualization (equal); funding acquisition (equal); investigation (equal); formal analysis (lead) and wrote the manuscript, writing - review and editing (equal)

All authors contributed to and have approved the final manuscript.

References

1. Abdallah, C., Cohen, C. I., Sanchez-Almira, M., Reyes, P. & Ramirez, P. (2009). Community integration and associated factors among older adults with schizophrenia. *Psychiatric services (Washington, D.C.)*, *60*(12), 1642–1648. https://doi.org/10.1176/ps.2009.60.12.1642
2. Afe, T. O., Emedoh, T. C., Ogunsemi, O. & Adegbohun, A. A. (2016). Intimate partner violence, psychopathology and the women with schizophrenia in an outpatient clinic South-South, Nigeria. *BMC psychiatry*, *16*, 197. https://doi.org/10.1186/s12888-016-0898-2
3. Ainsworth, M. D., Blehar, M. c., Waters, E. & Wall, S. N. (2015). *Patterns of attachment: A psychological study of the strange* [Interpersonal Relationships and Attachment Personality Inventory]. Psychology Press.
4. Andresen, B. (2012). *BB-PI. Beziehungs- und Bindungs-Persönlichkeitsinventar: Manual*. Hogrefe.
5. Augustin, V., Haas, K. & Egger, J. W. (2011). Liebe und Sexualität bei PsychotikerInnen. Psychologische und sozialpsychiatrische Aspekte im sexuellen und partnerschaftlichen Erleben und Verhalten von PatientInnen mit psychotischen Erkrankungen [Love and sexuality in psychotics - Psychological and socio-psychiatric aspects in the sexual and partner experiences and behavior of patients with psychotic illnesses]. *Psychologische Medizin*, *22*(1), 21–30.
6. Baer, N. & Fasel, T. (2009). "Sie wäre so begabt". Die Arbeitssituation von Menschen nach Psychosen ["She would be so talented." The working situation of people after psychoses.]. *Familiendynamik*, *34*(4), 346–359.
7. Bailer, M. & Hautzinger, M. (1993). Psychosenrisiko und Sozialverhalten: Soziale Kompetenz und soziale Kontakte bei jungen Erwachsenen mit schizotypischen bzw. zyklothymen Merkmalen [Risk of psychosis and social behavior: Social competence and social contacts in young adults with schizotypal or cyclothymic features.]. *Zeitschrift für Klinische Psychologie*, *22*(4), 406–419.
8. Bengtsson-Tops, A. & Hansson, L. (2001). Quantitative and qualitative aspects of the social network in schizophrenic patients living in the community. Relationship to sociodemographic characteristics and clinical factors and subjective quality of life. *The International journal of social psychiatry*, *47*(3), 67–77. https://doi.org/10.1177/002076400104700307
9. Bowlby, J. A. (1969). *Attachment and Loss*. Basic Books.
10. Bowlby, J. A. (1988). *Secure base: clinical applications of attachment theory*. Routledge.
11. Bowlby, J. A. (2008). *Attachment: Attachment and Loss Trilogy*. Basic Books.
12. Chatziioannidis, S., Andreou, C., Agorastos, A., Kaprinis, S., Malliaris, Y., Garyfallos, G. & Bozikas, V. P. (2019). The role of attachment anxiety in the relationship between childhood trauma and schizophrenia-spectrum psychosis. *Psychiatry research*, *276*, 223–231. https://doi.org/10.1016/j.psychres.2019.05.021
13. França, G., Laranjeira, E., Silva, F., Monteiro, L., Moreira, A. M. & Carvalho, S. (2020). Attachment Style and Insight in Schizophrenia: a Cross-Sectional Study. *The Psychiatric quarterly*, *91*(1), 31–43. https://doi.org/10.1007/s11126-019-09675-8
14. Fydrich, T., Sommer, G. & Brähler, E. (2007). *F-SozU. Fragebogen zur Sozialen Unterstützung: Manual* [Questionnaire on Social Support]. Hogrefe.

15. Gemeinsame Ethikkommission der Hochschulen Bayerns. (2022). *Unterlage zur Selbsteinschätzung "Ethik und Datenschutz"* [Self-assessment document "Ethics and data protection".]. https://www.gehba.de/fileadmin/daten/Gehba/GEHBa-Selbsteinschaetzung_2.2.docx
16. Gizdic, A., Hinojosa-Marqués, L., Kwapil, T. R. & Barrantes Vidal, N. (2020). M113. The Relationship between attachment styles and clinical presentation in early psychosis patients. *Schizophrenia Bulletin*, *46*(Supplement_1), S177-S178. https://doi.org/10.1093/schbul/sbaa030.425
17. Greenberg, J. S., Seltzer, M. M., Krauss, M. W., Chou, R. J.-A. & Hong, J. (2004). The effect of quality of the relationship between mothers and adult children with schizophrenia, autism, or down syndrome on maternal well-being: the mediating role of optimism. *The American journal of orthopsychiatry*, *74*(1), 14–25. https://doi.org/10.1037/0002-9432.74.1.14
18. Grube, M. & Dorn, A. (2007). Elternschaft bei psychisch Kranken [Parenthood and mental illness]. *Psychiatrische Praxis*, *34*(2), 66–71. https://doi.org/10.1055/s-2005-915394
19. Gumley, A. I., Taylor, H. E. F., Schwannauer, M. & MacBeth, A. (2014). A systematic review of attachment and psychosis: measurement, construct validity and outcomes. *Acta psychiatrica Scandinavica*, *129*(4), 257–274. https://doi.org/10.1111/acps.12172
20. Harley, E. W.-Y., Boardman, J. & Craig, T. (2012). Friendship in people with schizophrenia: a survey. *Social psychiatry and psychiatric epidemiology*, *47*(8), 1291–1299. https://doi.org/10.1007/s00127-011-0437-x
21. Hell, D. & Fürer, M. (1987). Schizophrenieverlauf bei Ehekonstanz und Partnerverlust [Course of schizophrenia with marital stability and partner loss]. *Sozial- und Praventivmedizin*, *32*(3), 154–156.
22. Herstell, S., Betz, L. T., Penzel, N., Chechelnizki, R., Filihagh, L., Antonucci, L. & Kambeitz, J. (2021). Insecure attachment as a transdiagnostic risk factor for major psychiatric conditions: A meta-analysis in bipolar disorder, depression and schizophrenia spectrum disorder. *Journal of psychiatric research*, *144*, 190–201. https://doi.org/10.1016/j.jpsychires.2021.10.002
23. Hinz, A., Kuhn, J., Decker, O., Lenz, A. & Jungbauer, J. (2010). Lebenszufriedenheit und subjektive Relevanz von Lebensbereichen bei schizophren Erkrankten [Life satisfaction and subjective importance of life domains in schizophrenia patients: the role of partnership and parenthood]. *Fortschritte der Neurologie-Psychiatrie*, *78*(3), 147–153. https://doi.org/10.1055/s-0028-1110026
24. Kilian, R., Lindenbach, I., Löbig, U., Uhle, M. & Angermeyer, M. C. (2001). Self-perceived social integration and the use of day centers of persons with severe and persistent schizophrenia living in the community: a qualitative analysis. *Social psychiatry and psychiatric epidemiology*, *36*(11), 545–552. https://doi.org/10.1007/s001270170005
25. Korver-Nieberg, N., Berry, K., Meijer, C. J. & Haan, L. de (2014). Adult attachment and psychotic phenomenology in clinical and non-clinical samples: a systematic review. *Psychology and psychotherapy*, *87*(2), 127–154. https://doi.org/10.1111/papt.12010
26. Kvrgic, S., Beck, E.-M., Cavelti, M., Kossowsky, J., Stieglitz, R.-D. & Vauth, R. (2012). Focusing on the adult attachment style in schizophrenia in community mental health centres: validation of the Psychosis Attachment Measure (PAM) in a German-speaking sample. *The International journal of social psychiatry*, *58*(4), 362–373. https://doi.org/10.1177/0020764011399004

27. Maß, R. (2001). *Eppendorfer Schizophrenie-Inventar.: Manual* [Eppendorf Schizophrenia Inventory]. Hogrefe.
28. Mentzos, S. (2017). *Lehrbuch der Psychodynamik: Die Funktion der Dysfunktionalität psychischer Störungen* [Textbook of psychodynamics: The function of the dysfunctionality of mental disorders]. Vandenhoeck & Ruprecht.
29. Monfort-Escrig, C. & Pena-Garijo, J. (2021). Attachment Dimensions predict Social Functioning in persons with Schizophrenia-Spectrum Disorders, regardless of Symptom Severity. *Actas espanolas de psiquiatria*, *49*(6), 269–281.
30. Müller, P., Gaebel, W., Bandelow, B., Köpcke, W., Linden, M., Müller-Spahn, F., Pietzcker, A. & Tegeler, J. (1998). Zur sozialen Situation schizophrener Patienten [On the social situation of schizophrenic patients]. *Der Nervenarzt*, *69*(3), 204–209. https://doi.org/10.1007/s001150050261
31. Nyer, M., Kasckow, J., Fellows, I., Lawrence, E. C., Golshan, S., Solorzano, E. & Zisook, S. (2010). The relationship of marital status and clinical characteristics in middle-aged and older patients with schizophrenia and depressive symptoms. *Annals of clinical psychiatry : official journal of the American Academy of Clinical Psychiatrists*, *22*(3), 172–179.
32. Pearce, J., Simpson, J., Berry, K., Bucci, S., Moskowitz, A. & Varese, F. (2017). Attachment and dissociation as mediators of the link between childhood trauma and psychotic experiences. *Clinical psychology & psychotherapy*, *24*(6), 1304–1312. https://doi.org/10.1002/cpp.2100
33. Ponizovsky, A. M., Nechamkin, Y. & Rosca, P. (2007). Attachment patterns are associated with symptomatology and course of schizophrenia in male inpatients. *The American journal of orthopsychiatry*, *77*(2), 324–331. https://doi.org/10.1037/0002-9432.77.2.324
34. Sörgaard, K. W., Hansson, L., Heikkilä, J., Vinding, H. R., Bjarnason, O., Bengtsson-Tops, A., Merinder, L., Nilsson, L. L., Sandlund, M. & Middelboe, T. (2001). Predictors of social relations in persons with schizophrenia living in the community: a Nordic multicentre study. *Social psychiatry and psychiatric epidemiology*, *36*(1), 13–19. https://doi.org/10.1007/s001270050285
35. Stain, H. J., Galletly, C. A., Clark, S., Wilson, J., Killen, E. A., Anthes, L., Campbell, L. E., Hanlon, M.-C. & Harvey, C. (2012). Understanding the social costs of psychosis: the experience of adults affected by psychosis identified within the second Australian National Survey of Psychosis. *The Australian and New Zealand journal of psychiatry*, *46*(9), 879–889. https://doi.org/10.1177/0004867412449060
36. Stuart, H. & Arboleda-Flórez, J. (2001). Community attitudes toward people with schizophrenia. *Canadian journal of psychiatry. Revue canadienne de psychiatrie*, *46*(3), 245–252. https://doi.org/10.1177/070674370104600304
37. Stuke, F., Bröcker, A.-L., Bayer, S., Heinz, A., Bermpohl, F., Lempa, G., Haebler, D. von & Montag, C. (2020). Between a rock and a hard place: Associations between Mentzos' "dilemma", self-reported interpersonal problems, and psychosocial functioning in individuals with non-affective psychoses. *Clinical psychology & psychotherapy*, *27*(4), 528–541. https://doi.org/10.1002/cpp.2437
38. Tasa-Vinyals, E., Álvarez, M.-J., Puigoriol-Juvanteny, E., Roura-Poch, P., García-Eslava, J. S. & Escoté-Llobet, S. (2020). Intimate Partner Violence Among Patients Diagnosed With Severe Mental Disorder. *The Journal of nervous and mental disease*, *208*(10), 749–754. https://doi.org/10.1097/NMD.0000000000001207

39. Velthorst, E., Fett, A.-K. J., Reichenberg, A., Perlman, G., van Os, J., Bromet, E. J. & Kotov, R. (2017). The 20-Year Longitudinal Trajectories of Social Functioning in Individuals With Psychotic Disorders. *The American journal of psychiatry*, *174*(11), 1075–1085. https://doi.org/10.1176/appi.ajp.2016.15111419
40. Wickham, S., Sitko, K. & Bentall, R. P. (2015). Insecure attachment is associated with paranoia but not hallucinations in psychotic patients: the mediating role of negative self-esteem. *Psychological medicine*, *45*(7), 1495–1507. https://doi.org/10.1017/S0033291714002633
41. Wieland, M. E., Rosenstock, J., Kelsey, S. F., Ganguli, M. & Wisniewski, S. R. (2007). Distal support and community living among individuals diagnosed with schizophrenia and schizoaffective disorder. *Psychiatry*, *70*(1), 1–11. https://doi.org/10.1521/psyc.2007.70.1.1
42. Wisman-van der Teen, A., Lemmers-Jansen, I. L. J., Oorschot, M. & Krabbendam, L. (2022). Exploring the association between social behaviour, trust, and its neural correlates in first episode psychosis patients and in individuals at clinical high risk for psychosis. *The British journal of clinical psychology*, *61*(3), 629–646. https://doi.org/10.1111/bjc.12327
43. Won, Y.-L. I. & Solomon, P. L. (2002). Community integration of persons with psychiatric disabilities in supportive independent housing: a conceptual model and methodological considerations. *Mental health services research*, *4*(1), 13–28. https://doi.org/10.1023/A:1014093008857
44. Xanthopoulou, P. D., Mbanu, J., Chevalier, A., Webber, M. & Giacco, D. (2022). Social Isolation and Psychosis: Perspectives from People with Psychosis, Family Caregivers and Mental Health Professionals. *Community mental health journal*, *58*(7), 1338–1345. https://doi.org/10.1007/s10597-022-00941-x

DOI: 10.13129/2282-1619/mjcp-4055