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Between a rock and a hard place: Associations between Mentzos' "dilemma", self-reported interpersonal problems, and psychosocial functioning in individuals with non-affective psychoses

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Abstract

Primary aim of this study was to determine the extent and type of self-reported interpersonal problems in patients with non-affective psychoses and their impact on psychosocial functioning. Furthermore, we aimed to explore potential links with the psychodynamic construct of Stavros Mentzos' "psychotic dilemma", which describes an insufferable inner tension caused by an individual's struggle of being torn between "self-oriented" and "object-oriented" tendencies.

In a cross-sectional study among 129 patients with non-affective psychoses, measures of cognition, symptom load and social functioning as well as a tentative, psychodynamic assessment of Mentzos' "dilemma" were obtained during a clinical research visit. Self-report data on interpersonal problems were gathered using the Inventory of Interpersonal Problems (IIP-64D) and compared with a German representative standard sample. Second, IIP-64D scores were compared between groups with or without Mentzos' "dilemma". Hierarchical regression analyses were performed to test for the impact of interpersonal problems on psychosocial functioning, while controlling for cognitive deficits and psychopathology.

Results showed that IIP-64D scores differed significantly from healthy controls, except for "self-centred" and "intrusive" interpersonal styles. Participants with a potential "psychotic dilemma" scored significantly higher on the subscales: "domineering", "self-centred", "cold", and "socially avoidant" than the group without a "psychotic dilemma". The total amount of interpersonal problems, and particularly high scores on the IIP-64D "socially avoidant" subscale, predicted psychosocial dysfunction, whereas a "cold" interpersonal style had an opposite effect.

In conclusion, specific interpersonal problems may predict psychotherapeutic outcome measures like psychosocial functioning and are partly compatible with the psychodynamic construct of Stavros Mentzos' "psychotic dilemma".

KEYWORDS

interpersonal problems, psychodynamic theory, psychosocial functioning, psychotherapy research, schizophrenia

1 | INTRODUCTION

One of the primary clinical criteria of schizophrenia is psychosocial dysfunction, which describes limitations in major areas of human activity, such as handling social interactions, maintaining relationships with family and friends, and performing at the workplace (DSM-5; American Psychiatric Association, 2013). Although the ability to have successful interpersonal relationships is one of the core capabilities in this context, corresponding impairments were found to be related to social isolation and to avoidance of social contacts (Dziwota, Stepulak, Włoszczak-Szubzda, & Olajossy, 2018). Accordingly, impairments in psychosocial function can belong to the most serious consequences for people suffering from schizophrenia spectrum disorders and contribute greatly to social marginalization (Burns & Patrick, 2007). In addition, an increasing amount of research has emphasized the influence of psychopathology and cognitive challenges as markers of psychosocial impairment in patients with non-affective psychoses (Bowie, Reichenberg, Patterson, Heaton, & Harvey, 2006; Kurtz & Richardson, 2011).

To examine the type of interpersonal encounters a person is likely to experience, the Inventory of Interpersonal Problems (IIP) was developed by Horowitz, Rosenberg, Baer, Ureño, and Villaseñor (1988). Based on the interpersonal theory of psychiatry, which was introduced by psychoanalyst Harry Stack Sullivan (1953), Timothy Leary (1957) devised the first circumplex model of interpersonal behaviour, portraying the variety of interpersonal problem patterns in terms of a circular continuum (see also Benjamin, 1974; Kiesler, 1983, 1996). This model provided the theoretical basis for the IIP, which was designed to operationalize research in the field of interpersonal problems. The IIP was shown to be a valuable tool in psychotherapy research (Bressi, Porcellana, Marinaccio, Nocito, & Magri, 2010; Huber, Albrecht, Hautum, Henrich, & Klug, 2009; McMillen & Hilsenroth, 2019; Philips, Wennberg, Werbart, & Schubert, 2006) but has rarely been used in patients with psychotic disorders. A limited number of smaller studies, however, suggest that patients with psychoses may share a characteristic pattern of interpersonal problems, with higher loads on the "socially avoidant", "exploitable", "non-assertive", and "self-sacrificing" subscales of the IIP (Berry, Barrowclough, & Wearden, 2008; Lysaker, Tsai, Henninger, Vohs, & Viverito, 2010; Mondrup & Rosenbaum, 2010; Startup, 1998). Furthermore, "self-oriented" dimensions of interpersonal problems of the IIP-64 (here, in particular, the subscales "cold" and "socially avoidant") were found to be associated with perceived

Key Practitioner Message

- IIP-64D scores of patients replicated prior results of a similar pattern in patients with non-affective psychoses, consisting of highest problem scores on the subscales "socially avoidant", "exploitable", "non-assertive", and "self-sacrificing" (Mondrup & Rosenbaum, 2010; Startup, 1998). Also, problem loads differed significantly from healthy controls, except for "self-centred" and "intrusive" interpersonal styles.

- Participants with a "psychotic dilemma" (tentatively diagnosed according to the psychodynamic theory of S. Mentzos) reported significantly more often a "domineering", "self-centred", "cold", and "socially avoidant" interpersonal style, than the group without a "psychotic dilemma".

- Individuals with non-affective psychoses, who are emotionally responsive and have a desire to affiliate with others, but act in an avoiding manner at the same time, showed the highest degree of functional impairment.

- Type and level of interpersonal problems predicted psychosocial dysfunction in patients with non-affective psychoses and might thus be a promising tool to guide psychotherapeutic processes and predict their outcome.

difficulties in the quality of therapeutic relationships in psychotic patients, thus predicting poorer treatment success (Johansen, Melle, Iversen, & Hestad, 2013). Another, observer rated, inventory based on a circumplex model of interpersonal behaviour, the "Impact Message Inventory—Circumplex" (Kiesler & Schmidt, 2006), was used in a study, which found hostile, dominant, and coercive interpersonal styles were associated with violence in patients with schizophrenia (Harris, Oakley, & Picchioni, 2014). To our knowledge, however, the specific role of interpersonal problems (as measured by the IIP-64D) with regard to psychosocial function in non-affective psychoses has not yet been investigated.

One area that has traditionally been concerned with interpersonal problem patterns is the field of psychodynamic psychotherapy, as aiming to create conscious awareness for interpersonal patterns and schemata, which are manifested in transference and counter-transference, is a mainstay of psychoanalysis. In

psychodynamic theory, the significant problems of people suffering from schizophrenia in establishing and maintaining relationships have been understood as arising from an existential antagonism between need and fear (Burnham, Gladstone, & Gibson, 1969; Pao, 1977), between autonomy and dependence (Mahler, Pein, & Bergman, 1979), or between separate and symbiotic states of the self (Benedetti, 1998). One of the most seminal concepts was formed by Stavros Mentzos, who suggested a "structural" dilemma between "self-oriented" and "object-oriented" tendencies as the foundation of psychotic vulnerability (Mentzos, 1991, 2009). Although symptoms of psychoses are often seen as consequences of a biologically grounded "defect", Mentzos underlined the functional and compensatory properties of psychotic phenomena. In contrast to historical conceptions, such as of Sigmund Freud who spoke of regression to autoerotism and primary narcissism in this context (for a comprehensive overview, see Heinz, 2002), Mentzos postulated, psychoses might represent elementary defense processes that are either activated by an insufferable inner tension with dilemmatic character or in the face of a forthcoming loss regarding the sense of self (Mentzos, 1991, 2009). A "psychotic dilemma", consequently, is characterized by a person's lack of competences to compromise on interpersonal issues: Antagonistic, intrapersonal self- and object-oriented tendencies both threaten the person's sense of self and can neither be reconciled nor consciously represented (Mentzos, 1991, 2009). Preserving one's own identity is only possible at the expense of radical withdrawal, but a complete lack of relationships equally challenges the sense of self. Object relations, on the other hand, threaten a person's sense of self through symbiosis and fusion, which is in line with Martin Dornes (1997), who already saw the emergence of a symbiotic mother and child relationship as an indicator of pathological development. According to Mentzos' theory, the structural disposition of a "psychotic dilemma" emerges in early childhood and can become apparent when challenged at individual points of transition (e.g., falling in love, parenthood, or separating from a loved one). In this situation, psychosis is assumed to reestablish a relation between oneself and an object and thus to protect a person's sense of self—even at the cost of losing touch with reality. Psychotherapeutic treatment strategies, such as those proposed by Lempa, von Haebler, and Montag (2016), suggest the initial use of implicit, exemplary interpersonal experiences within the therapeutic relationship to attenuate the patient's "psychotic dilemma". However, there is no psychometric instrument to capture the "psychotic dilemma", as understood by Mentzos (1991, 2009), and its presence can only be assumed based on clinical impression, including the reflection of the interactional scene and of the therapists' own emotions and response dispositions in this specific dyadic encounter, often referred to as counter-transference. The concept of using counter-transference in psychoanalysis for diagnostic purposes has a long tradition (Heimann, 1950), although contemporary views rather assume an intersubjective system based on both, the patient's transference and the analyst's own transference (Mitchell, 1988; Stolorow, 2013), as well as the "co-transference" (Orange, 1995). In this study, the term "counter-transference" was used in its broadest form, including any emotional reaction and response disposition experienced by the therapist or interviewing person in a unique interaction matrix, which is co-constructed by the two partners. Capturing implicit relationship experiences, which constitute an individual's interpersonal repertoire in form of object representations or cognitive-affective schemata (Luborsky & Crits-Christoph, 1998; Strupp & Binder, 1993), is mostly not possible based on descriptive clues but must rely on reflective awareness towards this mutual influence and on the therapist's own emotional experience.

Although the "psychotic dilemma" is a disposition that is inaccessible to consciousness, it can manifest itself in behavioural problems, which in turn are accessible to conscious reflection and might be captured with the help of self-report measures. Because the IIP-64D focuses on distressing interpersonal behaviours, Mentzos' concept of a "dilemmatic" structure could potentially be related to certain subscales. The polarity between self- and object-oriented tendencies in people with non-affective psychoses might impact both the "self-oriented", such as the "cold" and "socially avoiding" subscales, as well as their "object-oriented" counterpoles on the interpersonal circumplex model, the "intrusive" and "self-sacrificing" subscales (Figure 1).

The aim of the present study was to explore the dimensions of interpersonal problems, as measured by the IIP-64D, in patients with non-affective psychoses, their impact on psychosocial functioning, as measured by the Mini International Classification of Functioning Rating for Mental Disorders (Mini-ICF-APP; Linden, Baron, & Muschalla, 2009), and to investigate potential links with the psychodynamic construct of Stavros Mentzos' "psychotic dilemma". Based on prior research (Johansen et al., 2013; Mondrup & Rosenbaum, 2010; Startup, 1998), we hypothesized that the total amount of interpersonal problems would be larger in the patient sample than in healthy controls and that the present sample's interpersonal problem load would show a similar pattern like in previous studies (Mondrup & Rosenbaum, 2010; Startup, 1998). We therefore expected the highest problem scores on the IIP-64D scales "socially avoidant", "exploitable", "non-assertive", and "self-sacrificing". Second, based on the above-mentioned theoretical considerations, we expected that the clinical assessment of Mentzos' "dilemma" would be significantly associated with greater impairments in both the "self-oriented" (e.g., "cold" and "socially avoidant") and the "other-oriented" IIP-64D scales (e.g., "intrusive" and "self-sacrificing"). Third, we predicted that the extent of interpersonal problems would explain a meaningful part of the observed variance in social functioning, above and beyond known predictors like general cognition, as measured by the Auditory Verbal Learning Test (AVLT; Heubrock, 1992), and symptom severity, as measured by the Positive and Negative Syndrome Scale (PANSS; Kay, Fiszbein, & Opler, 1987). At last, we expected high scores on those IIP-64D subscales that presumably implicate the presence of a "psychotic dilemma", to contribute significantly to explaining the level of psychosocial functioning in people with schizophrenia or schizoaffective disorders.

FIGURE 1 Subscales are shown on corresponding octants within the circumplex model of the IIP-64D (Horowitz et al., 2000)
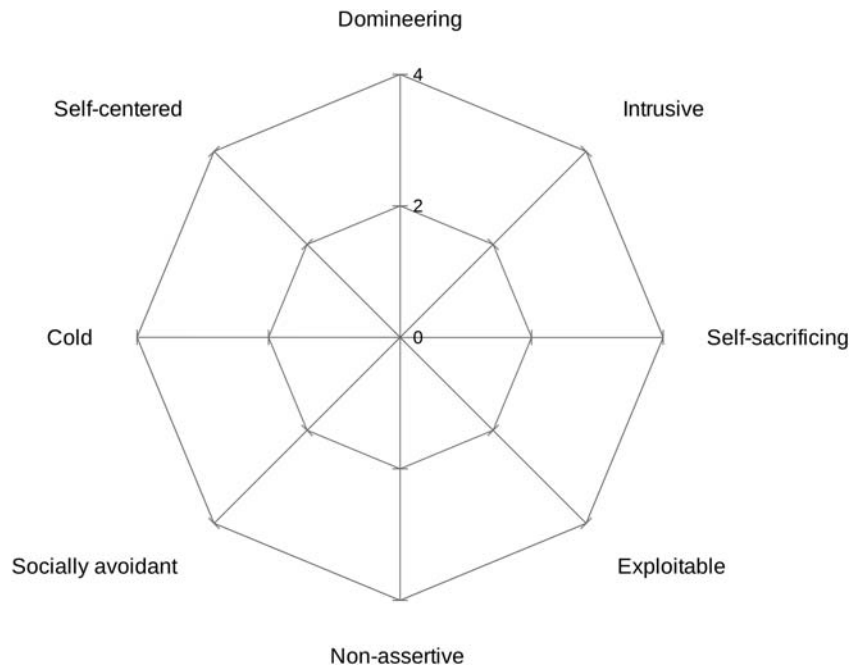
2 | METHOD

2.1 | Participants

The study was approved by the local ethics committee of the Charité–Universitätsmedizin Berlin, Germany. Included were n = 129 subjects from the baseline sample of the ongoing study "Modified Psychodynamic Psychotherapy for Patients with Schizophrenia—A Randomized-Controlled Efficacy Study" (ClinicalTrials.gov-ID: NCT02576613; see Table 1 for demographics). All participants gave written informed consent. Eligible were outpatients aged 18 to 65 years, meeting the DSM-IV-TR criteria of schizophrenia or schizoaffective disorder (American Psychiatric Association, 2000), as confirmed by an experienced psychiatrist, using a SCID-I interview (First, 2014), and completed by any further available information, like hospital records and discharge letters. Exclusion criteria were the presence of DSM-IV Axis I mental disorders other than schizophrenia or schizoaffective disorder, organic brain disease, relevant somatic illness, an indication for a primarily addiction-specific treatment or illicit drug abuse, acute suicidality, or an acute endangerment of others.

In order to examine the relationship between IIP-64D scores of the present sample compared with healthy controls, a German representative standard sample (Horowitz, Alden, Kordy, & Strauß, 2000) was used.

2.2 | Procedure

Participants were recruited via flyers or referred to the study by their physicians and screened for inclusion and exclusion criteria by experienced clinicians. Research visits included comprehensive diagnostics, consisting of standardized instruments as well as an interview, focusing on psychosocial functioning. Visits were carried out by two psychodynamically trained psychiatrists or clinical psychologists, who subsequently evaluated the visit and came to a consensus. At the end of the appointment, participants were asked to complete a battery of self-report questionnaires at home, including the IIP-64D, and to mail them back to the research team.

2.3 | Measures

2.3.1 | Clinical interview

Interviews were conducted by two trained clinical psychologists or psychiatrists and followed the guidelines of the Operationalized Psychodynamic Diagnostics (OPD-2; OPD Arbeitskreis, 2014), which is an instrument commonly used to evaluate conflicts, structural integration, and interpersonal relations of a person. The interviews were recorded on audiotape, each lasting between 60 and 90 min. The beginning aimed at establishing a working relationship that allowed for an in-depth interview and encouraged reflectivity in the patient. Information on participants' disease biography and current symptomatology were obtained, before narrative episodes with family members or other meaningful figures in life were elaborated, and domains of psychosocial functioning were assessed. Based on clinicians' experience of the patient initiating a relationship during personal interaction and his or her own counter-transference during the interview, the presence of a "psychotic dilemma" was tentatively assessed (dilemma present: "yes" or "no"). The presence of a "dilemma" was assumed when the clinical investigators reported either specific feelings of coming too close to the patient or being too inquisitive and tactless, or described concerns of an unexpected withdrawal of the patient, fears of losing oneself, or even fusional tendencies in contact with the patient.

TABLE 1 Participants' characteristics

Variable	N	Value
Age (Mean ± SD in years)	129	38.02 ± 11.36
Education (Mean ± SD in years)	128	15.24 ± 3.22
Verbal IQ (Mean ± SD)	127	31.31 ± 5.81
Gender	129	
Male/female (%)	73/56	56.60/43.40
Diagnosis	129	
Schizophrenia/schizoaffective disorder (%)	97/32	75.20/24.80
Illness duration (Mean ± SD in years)	128	13.34 ± 9.79
Number of hospital stays (Mean ± SD)	127	4.80 ± 4.80
Age of onset (Mean ± SD in years)	128	24.68 ± 7.79
Medication	127	
Antipsychotic (%)	112	88.19
Mood stabilizers (%)	8	6.30
Antidepressant (%)	27	21.26
No psychiatric medication (%)	13	10.24
Mini-ICF total score (Mean ± SD)	128	17.97 ± 8.55
GAF (Mean ± SD)	127	58.57 ± 12.78
Dilemma (yes/no in %)	128	57.89/42.20
AVLT (1–5; Mean ± SD)	128	9.00 ± 2.49
PANSS_cognition (Mean ± SD)	128	16.02 ± 5.23
PANSS_depression (Mean ± SD)	128	10.97 ± 3.87
PANSS_excitement (Mean ± SD)	128	5.56 ± 1.85
PANSS_negative (Mean ± SD)	128	15.33 ± 6.09
PANSS_positive (Mean ± SD)	128	11.02 ± 4.86
IIP-64D total score (Mean ± SD)	101	1.48 ± 0.60
IIP-64D_domineering (Mean ± SD)	102	0.84 ± 0.61
IIP-64D_self-centred (Mean ± SD)	101	1.19 ± 0.71
IIP-64D_cold (Mean ± SD)	103	1.37 ± 0.86
IIP-64D_socially avoidant (Mean ± SD)	103	1.58 ± 0.93
IIP-64D_non-assertive (Mean ± SD)	103	1.96 ± 0.86
IIP-64D_exploitable (Mean ± SD)	101	1.88 ± 0.79
IIP-64D_self-sacrificing (Mean ± SD)	101	1.81 ± 0.81
IIP-64D_intrusive (Mean ± SD)	101	1.25 ± 0.73

Note. AVLT(1–5): Auditory Verbal Learning Test, mean score of the five initial presentations; Dilemma: explorative variable based on clinical interaction and counter-transference; GAF: Global Assessment of Functioning; IIP-64D: Inventory of Interpersonal Problems 64 items, German version; Mini-ICF: Mini-ICF-Rating for Mental Disorders; PANSS: Positive and Negative Syndrome Scale, five-factor structure (Citrome et al., 2011); SD: standard deviation; Verbal IQ: Wortschatztest; all values represent raw, nonstandardized scores.

2.3.2 | Mini-ICF-Rating for Mental Disorders

The Mini-ICF-Rating for Mental Disorders (Mini-ICF-APP; Linden et al., 2009) represents the "activities and participation" component of the ICF (World Health Organization, 2001) in the context of mental illness. Thirteen domains of capacity are assessed: (a) adherence to

regulations, (b) planning and structuring of tasks, (c) flexibility and ability to adapt, (d) professional skills, (e) competence to judge and decide, (f) perseverance, (g) assertiveness, (h) contact with others, (i) group integration, (j) intimate relationships, (k) spontaneous activities, (l) self-care, and (m) mobility. Of note is that Mini-ICF-APP items do neither refer to symptom load in defining functional capacities nor is social behaviour included in the nine "nonsocial" dimensions. Each dimension is rated on a five-point Likert scale (0 = *no impairment*, 1 = *mild impairment*, 2 = *moderate disability*, 3 = *severe disability*, 4 = *total disability*). The raters use all available information, the individual's self-report as well as observations from the interview situation. The total score can range from 0 to 52. The interrater reliability of the Mini-ICF-APP lies between $r = .70$ (untrained rater) and $r = .92$ (trained rater). Furthermore, it has been shown that the degree of psychosocial impairments correlates with measures of psychopathology (number of ICD-10 F-diagnoses, SCL-90-R), as well as with the ability to work and the duration of disability. The rating of the Mini-ICF-APP is change sensitive, and changes in the degree of impaired abilities can be depicted in the course of treatment (Mini-ICF-APP Manual; Linden et al., 2009).

2.3.3 | Multiple-choice vocabulary test

A multiple-choice vocabulary test (Wortschatztest; Schmidt & Metzler, 1992) assessed verbal intelligence and consisted of 40 word recognition tasks (one target word, five distractors). The internal consistency of the Wortschatztest is $\alpha = .94$, and the split-half reliability is $r = .95$ (Schmidt & Metzler, 1992).

2.3.4 | Auditory Verbal Learning Test

The AVLT (Heubrock, 1992) examines attention, verbal learning, and executive function. Subjects are required to learn a word list that is presented verbally five times. Recall will be evaluated after every trial and again after presenting a new list of interfering words. For statistical analysis, the mean score of the five initial presentations (AVLT [1–5]) was used to assess verbal memory and learning (Heubrock, 1992).

2.3.5 | Positive and Negative Syndrome Scale

The PANSS (Kay et al., 1987) comprises 30 items on three scales and evaluates the symptomatology of participants. The original subscales "positive symptoms" (seven items), "negative symptoms" (seven items), and "general psychopathology" (16 items) are each being rated on a scale from 1 (*absent*) to 7 (*extreme*). The internal consistency of the scales varies between $\alpha = .73$ and $\alpha = .83$ and the retest reliability between $r_{tt} = .60$ and $r_{tt} = .80$ (Kay et al., 1987). For a better differentiation between affective and negative

symptoms, a five-factor solution of the PANSS (cognition [nine items], depression [five items], excitement [four items], negative [seven items], and positive [five items]) was used (Citrome, Meng, & Hochfeld, 2011).

2.3.6 | Inventory of Interpersonal Problems

The IIP (IIP-64D; Horowitz et al., 2000) is a self-assessment tool focusing on distressing interpersonal behaviours. Sixty-four items are rated on a 5-point Likert scale from 0 (*not distressed at all about this problem*) to 4 (*extremely distressed about this problem*). In order to measure subjective behavioural difficulties, 39 items are phrased as "It is hard for me to…", whereas the remaining 25 items, meant to measure behavioural excesses, are phrased as "These are things I do too much: …". The IIP-64D is based on a circumplex model, with each octant of the circumplex model representing one subscale of the IIP-64D and consisting of eight items from the questionnaire (Alden, Wiggins, & Pincus, 1990; Kachin, Newman, & Pincus, 2001; Figure 1). The scales describe either (a) domineering behaviour, (b) self-centred behaviour, (c) coldness, (d) social avoidance, (e) unassertiveness, (f) exploitability, (g) self-sacrificing behaviour, or (h) intrusive behaviour. In addition, a total value is calculated, which demonstrates the extent of interpersonal problems of an individual subject. The validity and reliability of the IIP-64D have been supported in several studies, based on data from a representative sample of the German population (n = 3047; Horowitz et al., 2000). The IIP-64D was used in psychodynamic contexts, as for example, in research investigating the effectiveness of psychoanalytic psychotherapy in different settings (Bressi et al., 2010; Huber et al., 2009; Philips et al., 2006).

2.4 | Data analysis

Based on recommendations of Becker and Mohr (2005), as well as Gurtman (1996), who argue that an ipsatation of IIP-64D values, that is, subtracting the individual's mean score from each response the participant gave in the questionnaire, can lead to false diagnostic conclusions, we calculated scale scores of the IIP-64D using raw, nonipsatized values. Independent samples t tests were then conducted, in order to examine the relationship between IIP-64D scale scores and total scores of the present sample compared with a German representative standard sample (Horowitz et al., 2000). Control for type I error was performed according to Bonferroni–Holm correction (Shaffer, 1995). We then conducted robust independent samples t tests, to examine the relationship of our assessment of the "psychotic dilemma" and the extent and type of interpersonal problems (as measured by IIP-64D scale scores and the total score).

In order to analyse independent contributions of cognition, symptomatology, and interpersonal problems in the prediction of participants' impairment of psychosocial functioning, two hierarchical multiple regression analyses were carried out. In both models, cognition (AVLT) was entered in the first block, and symptomatology

(PANSS) was entered in the second block. The third and final block differed between regressions: While the third block of the first model introduced the overall extent of interpersonal problems (IIP-64D total score), the third block of the second model entailed more detailed information on the type of interpersonal problems (all IIP-64D scale scores were entered as predictors). Data were checked for the assumptions of hierarchical multiple regressions, including multicollinearity, normality, linearity, and homoscedasticity. Furthermore, bootstrapping confidence intervals and p values as well as analysing the data using robust regressions both showed that our interpretation of the models did not change, indicating that the nonrobust estimates have not been unduly biassed by properties of the data (Field, 2018). All analyses were performed using SPSS 25.0 (IBM Corp, 2017).

3 | RESULTS

Ninety-nine patients completed all relevant baseline assessments without any missing data. Demographic and psychometric data are presented in Table 1, independent samples t tests are presented in Table 2 and Table 3, and results of hierarchical multiple regression analyses are shown in Table 4.

Compared with a German representative standard sample (Horowitz et al., 2000), participants' mean scores for the present sample differed significantly on all IIP-64D scale scores as well as the total score, except for the scales "self-centred" and "intrusive" (Figure 2). Independent samples t tests showed that participants scored significantly lower on the IIP-64D scale "domineering" and significantly higher on all other scales: "cold", "socially avoidant", "non-assertive", "exploitable", "self-sacrificing", as well as the "IIP-64D total" score. After adjusting p values by applying Bonferroni–Holm corrections, the results remained significant (Shaffer, 1995; Table 2).

Robust independent samples t-tests showed that participants, who were tentatively diagnosed with a "psychotic dilemma", scored significantly higher on all "self-oriented" subscales of the IIP-64D ("domineering", "self-centred", "cold", and "socially avoidant") than participants, who were not. The "object-oriented" subscales ("non-assertive", "exploitable", "self-sacrificing", and "intrusive") as well as the IIP-64D total score showed no significant differences between these two groups (Table 3).

Hierarchical multiple regression analyses were performed to test whether interpersonal problem scores significantly predicted participants' psychosocial functioning, beyond the impact of cognition and psychopathology. In an initial step, cognition (AVLT) explained 4.3% of the variance ($F(1, 97) = 4.3$, $p = .040$), but when entering psychopathology (PANSS) into the second block of the models, cognitive ability added no further explanation of variance. Four factors of psychopathology ("cognition", "depression", "negative", and "positive") significantly explained 64.4% of the variance ($R^2 = 0.64$, $F(6, 92) = 27.8$, $p < .001$), but the factor "excitement" was not associated with social functioning. In the next step, the IIP-64D total score was entered into the third block of the first regression model: It added another part of

TABLE 2 Results of independent samples *t* test for IIP-64D scale scores and total score in representative standard sample and sample of patients with non-affective psychoses

IIP-64D	Patient sample			Standard sample			95% CI	*p*	Bonferroni–Holm corrected *p*
	M	*SD*	*n*	*M*	*SD*	*n*			
Domineering	0.84	0.61	102	1.10	0.65	3047	−0.39, −0.14	.000	.000
Self-centred	1.19	0.71	102	1.18	0.60	3047	−0.11, 0.12	.924	1.00
Cold	1.37	0.86	102	1.20	0.68	3047	0.03, 0.31	.014	.042
Socially avoidant	1.58	0.93	102	1.26	0.72	3047	0.17, 0.46	.000	.000
Non-assertive	1.96	0.86	102	1.44	0.75	3047	0.37, 0.67	.000	.000
Exploitable	1.88	0.79	102	1.45	0.66	3047	0.30, 0.56	.000	.000
Self-sacrificing	1.81	0.80	102	1.53	0.62	3047	0.16, 0.41	.000	.000
Intrusive	1.25	0.73	102	1.23	0.61	3047	−0.10, 0.14	.781	1.00
Total	1.48	0.60	102	1.30	0.52	3047	0.08, 0.28	.001	.003

Note. CI: confidence interval; IIP-64D: Inventory of Interpersonal Problems 64 items, German version.

TABLE 3 Results of robust independent samples *t* test for IIP-64D scale and total scores in participants with and without a clinical diagnosis of Mentzos' "dilemma"

IIP-64D	Dilemma: Yes			Dilemma: No			95% CI	*t*	*p*
	M	*SD*	*n*	*M*	*SD*	*n*			
Domineering	0.92	0.63	57	0.69	0.55	43	−0.50, −0.04	−2.17	.023
Self-centred	1.29	0.74	56	1.05	0.67	43	−0.65, −0.03	−2.08	.028
Cold	1.54	0.89	58	1.14	0.77	43	−0.79, −0.08	−2.21	.018
Socially avoidant	1.79	0.95	58	1.29	0.83	43	−0.97, −0.20	−2.99	.000
Non-assertive	2.06	0.90	58	1.82	0.82	43	−0.70, 0.12	−1.38	.144
Exploitable	1.98	0.80	56	1.72	0.77	43	−0.64, 0.11	−1.41	.159
Self-sacrificing	1.82	0.79	56	1.77	0.82	43	−0.49, 0.22	−0.77	.452
Intrusive	1.24	0.78	56	1.22	0.64	43	−0.34, 0.34	−0.00	.998
Total	1.58	0.64	56	1.34	0.54	43	−0.56, 0.01	−1.88	.067

Note. CI: confidence interval; Dilemma: explorative variable based on clinical interaction and counter-transference; IIP-64D: Inventory of Interpersonal Problems 64 items, German version.

the observed variance (R^2 change = 3%) and significantly predicted impairments in social functioning above and beyond the effect of the controls ($R^2 = 0.67$, $F(7, 91) = 26.9$, $p < .001$). In the second regression model, we then replaced the IIP-64D total score in the third block with the IIP-64D individual scale scores, which added another part of the observed variance (R^2 change = 8.7%) and significantly predicted

TABLE 4 Two models of hierarchical multiple regression analyses predicting level of social functioning from "IIP-64D total score" as well as "IIP-64D scale scores"

Predictor	B	95% BCa CI	SE B	ß	p	AIC
Step 1 Models 1 and 2						
Constant	23.16	[16.73, 29.50]	3.12		.000	
AVLT mean	−0.69	[−1.33, −0.04]	0.33	−.21	.040	
						408.38
Step 2 Models 1 and 2						
Constant	−7.37	[−14.00, −1.08]	3.33		.029	
AVLT mean	−0.15	[−0.59, 0.34]	0.21	−.04	.499	
PANSS_cognition	0.52	[0.26, 0.73]	0.14	.30	.000	
PANSS_depression	0.51	[0.21, 0.83]	0.14	.25	.000	
PANSS_excitement	0.18	[−0.40, 0.76]	0.28	.04	.524	
PANSS_negative	0.56	[0.32, 0.79]	0.11	.39	.000	
PANSS_positive	0.27	[−0.02, 0.57]	0.13	.15	.036	
						320.35
Step 3 Model 1 (with IIP-64D total score)						
Constant	−7.48	[−13.22, −2.25]	3.20		.022	
AVLT mean	−0.23	[−0.62, 0.19]	0.21	−.07	.270	
PANSS_cognition	0.48	[0.22, 0.70]	0.14	.28	.001	
PANSS_depression	0.28	[−0.06, 0.63]	0.16	.14	.081	
PANSS_excitement	0.09	[−0.41, 0.67]	0.27	.02	.746	
PANSS_negative	0.58	[0.36, 0.78]	0.11	.40	.000	
PANSS_positive	0.29	[0.04, 0.57]	0.12	.17	.019	
IIP-64D_total	2.70	[1.02, 4.48]	0.94	.21	.005	
						313.75
Step 3 Model 2 (with IIP-64D scale scores)						
Constant	−5.04	[−10.50, 0.16]	3.15		.114	
AVLT mean	−0.17	[−0.64, 0.35]	0.20	−.05	.402	
PANSS_cognition	0.46	[0.23, 0.70]	0.14	.27	.001	
PANSS_depression	0.11	[−0.23, 0.46]	0.16	.05	.506	
PANSS_excitement	−.05	[−0.60, 0.48]	0.28	−.01	.852	
PANSS_negative	0.55	[0.28, 0.80]	0.12	.38	.000	
PANSS_positive	0.27	[−0.03, 0.58]	0.12	.16	.023	
IIP-64D_domineering	−2.56	[−5.72, 0.32]	1.37	−.20	.065	
IIP-64D_self-centred	2.63	[−0.32, 4.92]	1.41	.24	.066	
IIP-64D_cold	−2.79	[−5.54, 0.19]	1.11	−.30	.014	
IIP-64D_socially avoidant	4.22	[2.08, 6.35]	1.08	.50	.000	
IIP-64D_non-assertive	−1.61	[−3.60, 0.37]	1.03	−.18	.120	
IIP-64D_exploitable	0.79	[−1.73, 2.96]	1.12	.08	.479	

(Continues)

TABLE 4 (Continued)

Predictor	B	95% BCa CI	SE B	ß	p	AIC
IIP-64D_self-sacrificing	0.69	[−1.73, 3.38]	1.06	.07	.518	
IIP-64D_intrusive	0.89	[−1.88, 3.29]	1.08	.08	.414	
						308.43

Note. N = 99. BCa CI: confidence intervals and standard errors per BCa-bootstrapping with 1,000 BCa samples. R^2 = .04 for Step 1 (p = .040); ΔR^2 = .6 for Step 2 (p < .001); ΔR^2 = .03 for Step 3 of Model 1 (p = .005); ΔR^2 = .09 for Step 3 of Model 2 (p = .002).
Abbreviations: AIC: Akaike information criterion; AVLT: Auditory Verbal Learning Test; IIP-64D: Inventory of Interpersonal Problems 64 items, German version; PANSS: Positive and Negative Syndrome Scale, five-factor structure (Citrome et al., 2011).

impairments in social functioning (R^2 = 0.73, $F(14, 84)$ = 16.4, p < .001). In this model, best predictors of decreased functioning were high values on the IIP-64D scale "socially avoidant" (β = .50, p < .001), followed by low values on the scale "cold" (β = −.30, p = .014), whereas other subscales did not make a unique significant contribution. In both models, either containing the IIP-64D total score or the individual scale scores, PANSS factors "cognition", "negative", and "positive" continued to provide a significant, independent contribution to the prediction of psychosocial dysfunction. The factor "depression" explained a significant part of the variance at first but did not have a significant influence on psychosocial functioning beyond the influence of interpersonal problems (Table 4). When calculating the Akaike information criterion (Akaike, 1973) as a measure for model selection, the final models for both hierarchical multiple regression analyses received the lowest Akaike information criterion scores, indicating that these models were the best fitting models for the given data (Table 4). Inclusion of verbal IQ as an additional covariate to Step 1 of the models did not alter the final results.

4 | DISCUSSION

First aim of this study was to compare the extent and pattern of self-reported interpersonal problems of a sample of patients with non-affective psychoses and healthy controls. Results indicate that

individuals with non-affective psychoses were more likely to be afflicted with interpersonal problems (as measured using the IIP-64D) than subjects from a German representative standard sample. Specifically, our findings suggest that people suffering from non-affective psychoses rate their interpersonal behaviours as significantly colder, more socially avoidant, non-assertive, exploitable, and self-sacrificing than healthy controls. No differences were found regarding self-centred and intrusive behaviour, whereas the general population rated their interpersonal behaviours as significantly more dominant. Results support our first hypothesis and replicate prior results of a similar pattern in patients with non-affective psychoses (Mondrup & Rosenbaum, 2010; Startup, 1998) and also add to findings of affiliative skill impairments in schizophrenia (e.g., Blanchard, Park, Catalano, & Bennett, 2015; Mueser et al., 2010).

Regarding our second hypothesis, clinical assessments of Mentzos' "psychotic dilemma" were examined in relation to the evaluation of interpersonal problems. Participants, who had been tentatively diagnosed with a "psychotic dilemma", scored significantly higher on all "self-oriented" subscales of the IIP-64D ("domineering", "self-centred", "cold", and "socially avoidant") than participants without a "psychotic dilemma". This result might support assumptions of a particular, "dilemmatic", interpersonal vulnerability of psychotic patients that is compensated by active withdrawal and attempts to control emotional social interactions. However, in contrast to our expectation, the "object-oriented" subscales ("non-assertive", "exploitable", "self-
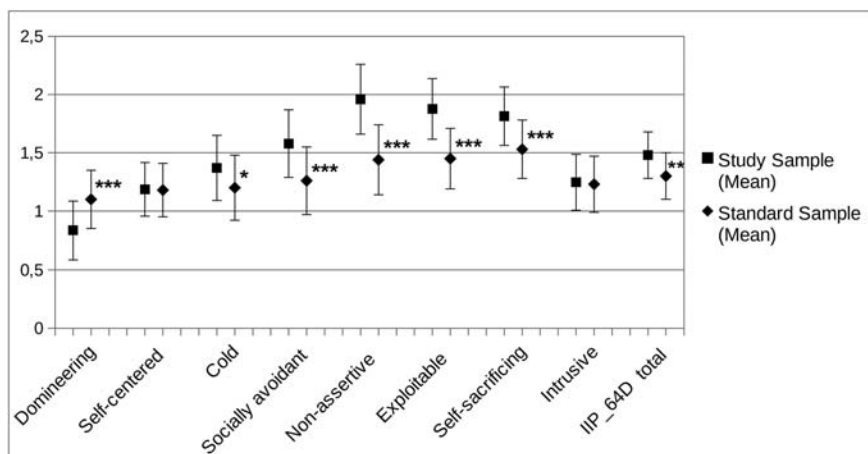
FIGURE 2 The figure shows mean differences in the IIP-64D scale scores as well as the total score between the study sample and a German representative standard sample (shown with the 95% CIs of the mean differences). *p < .05. **p < .01. ***p < .001

sacrificing", and "intrusive") as well as the IIP-64D total score, showed no significant group differences. One interpretation of these findings might be that the IIP-64D does not capture the "psychotic dilemma" itself but rather the way someone with this disposition behaves in an interpersonal context and reacts to a relationship offer. It seems conceivable that patients suffering from a hypothetical inner "dilemma" between "self- and object-oriented" tendencies may primarily compensate this predicament with "self-oriented" external behaviours like emotional control, withdrawal, and avoidance. In contrast, persons who try to compensate their potential "psychotic dilemma" in the opposite manner, may not show higher values on the "object-oriented" subscales of the IIP-64D, which may also capture other types of conflict (like the one between care vs. self-sufficiency).

Passive behavioural solutions of a "psychotic dilemma" might be less accessible to self-reflection and rather relate to alterations in basic self-experience, ego boundaries, and intentionality (Federn, 1978; Heinz et al., 2016; Sass & Parnas, 2003), which may result in subtle losses of autonomy and identity. Yet the assessment of the "psychotic dilemma" was based on counter-transference of the researchers, and therefore necessarily influenced by their entire subjectivity, not only comprising attitudes, memories, and professional experiences but also, as an essential part, his or her own transference dispositions and established co-transference (Mitchell, 1988; Orange, Atwood, & Stolorow, 1997; Stolorow, 2013). Although researchers conducting the interviews were particularly trained for this part of the diagnostic process and prepared to attend to their personal feelings, memories, and attitudes, as well as to reflect specific interaction sequences between patients and themselves on a metalevel (Ogden, 2004), subjective assessments nonetheless have to be considered with extreme caution. However, research related to counter-transference in clinical assessment contexts have shown acceptable intraclass correlation coefficients (Laverdière, Beaulieu-Tremblay, Descôteaux, & Simard, 2018), substantiating that counter-transference reactions might consist of both subjective and objective parts (Kiesler, 2001). Interrater reliability, though, might differ for various counter-transference reactions (Hafkenscheid, 2012), and the therapists' experience of counter-transference can occur at very different levels of reflectivity and mentalizing (Barreto & Matos, 2018).

In our third hypothesis, we anticipated the extent of interpersonal problems to explain a meaningful part of the observed variance in psychosocial functioning, beyond known predictors. In accordance with earlier findings, cognitive performance (Kurtz, Moberg, Ragland, Gur, & Gur, 2005) and also PANSS negative and cognitive symptoms (e.g., Bowie et al., 2006) significantly predicted psychosocial functioning. Depression explained a significant part of the variance at first but appeared to be mediated by interpersonal problems. Positive symptoms provided a significant, independent, though smaller contribution to the prediction of psychosocial function. In line with our hypothesis, the extent of interpersonal problems, as a whole (as measured by the IIP-64D total score), significantly predicted impairments of functional capabilities, beyond measures of cognition and symptom load.

At last, we expected high scores on those IIP-64D subscales that presumably implicate the presence of a "psychotic dilemma", to contribute significantly to explaining the level of social functioning in patients. Although functional decline is expected in this group and poses a diagnostic criterion of the DSM, the exact distribution of problem dimensions within the field of interpersonal problems has not been fully characterized. Contrary to expectations, results of the hierarchical regression analysis showed no significant influence of the "object-oriented" subscales on psychosocial function, even though the problem load on most of those scales considerably differed between patients and healthy controls. One explanation might be that in the case of these more "object-oriented" participants, adjustment and adaptation are rewarded—in social life but also in the framework of the psychiatric support system. One might assume that participants, who show this kind of behaviour, are more eager to act in a socially desirable way and are able to accept help, while therapeutic relationships may be easier to establish. Nevertheless, these patients still might suffer from vulnerabilities regarding an autonomous sense of self, identity, and intentionality, even if its impact on functioning can be compensated to a certain degree by supportive others.

Regarding the "self-oriented" subscales, the scales "cold" and "socially avoiding" made a unique contribution to psychosocial functioning. This result is consistent with prior findings, suggesting that psychosocial deficits were related to the avoidance of social contacts and social isolation in people with schizophrenia (Dziwota et al., 2018) and that avoidant personality traits were strongly associated with non-affective psychoses (Keshavan et al., 2005). Interestingly, in our counter-transference based assessment, a "psychotic dilemma" was more likely assumed in patients who scored high on the interpersonal problem scale "cold", but participants with low scores on this scale showed higher functional impairments. An explanation might be that participants with higher problem loads on the subscale "cold" might stabilize themselves through emotional control or reduced emotional responsivity and in turn might experience less social distress than patients scoring low on this scale. Without a strong desire for close social relationships, they may find themselves more likely in suitable work environments and in turn might experience less negative impact on psychosocial function. Accordingly, impairments of functional capabilities rise when participants report less problem behaviour on the scale "cold". These findings extend prior results (Blanchard et al., 2015), which showed that although patients perform more poorly than controls on social skill tasks, their positive appraisals of an interaction partner and their desire to interact are not affected. One could assume that those people still desire to have relationships with others but have to deny it in the consequence of their illness. This assumption is illustrated by excerpts of two clinical interviews (see Table 5). Both participants showed the highest scores on psychosocial impairments in the present sample and were also diagnosed with a potential "psychotic dilemma", based on clinicians' assessment.

Patients' accounts of being torn between the need for withdrawal and avoidance and the simultaneous desire for human contact are complemented by results of a different body of research, focusing attachment theory in psychoses. Based on the conception that attachment styles are influenced by an individual's positive or negative models of self and others, Bartholomew and Horowitz (1991)

TABLE 5 Excerpts of two clinical interviews

Participant 1: "Jane", a 35-year-old woman diagnosed with paranoid schizophrenia, with high scores on impairment in psychosocial function (Mini-ICF total score of 37) and one of the highest scores on the IIP-64D subscale "socially avoidant" (IIP-64D scale score "socially avoidant" of 3.13).

When asked about her life and the course of her illness, "Jane" reflects: "It all happened so fast and I was always in the same place. And it still seems like that to me. Everybody else is building, making, and marrying. Having children. And I always stay in the same place. That's the way it is with me now. I can not get any further. [...] Everything has become hard for me. It has always been difficult, but now it's getting harder. Even more difficult. I do not want to be around people anymore. I can not remember at all how I should behave among people. I mean, how one is even supposed to be. And supposed to behave".

Later on in the interview, "Jane" was asked about what she would wish should change with psychotherapy or what she would like to work on, in case she would be included in the treatment condition and she states: "I would like to be back in life. Not to be afraid anymore. Talking to people. Being with people. The people who want something good. Not the evil ones, who pursue me".

Participant 2: "Robert", a 26-year old university drop-out diagnosed with paranoid schizophrenia, with high scores on impairment in psychosocial function (Mini-ICF total score of 36) and the lowest score on the IIP-64D subscale "cold" (IIP-64D scale score "cold" of 0).

"Robert" describes in the beginning of the interview that he has no interest in talking to or meeting people and that the only thing he is doing currently, is sitting at home smoking cigarettes. Asked about his current situation, he states: "Not so good. I receive unemployment benefits, have no diploma. No real friends either. [...] In childhood and youth, I used to have friends. Not anymore though. Now, I really cannot be bothered with people. I have nothing to talk about anymore. Before – I used to have things to tell. I talked about what I did or what had happened at school that day. But now, I have nothing more to tell the people".

"Robert" sounds tired, and much older than his age. During the whole interview he talks in slow, monotonous sentences—but when asked about the nature of a hypothetical free wish, all of a sudden, he becomes animated and describes yearningly: "I wish I had money, for travelling. Yes. I would like to do that. [...] Where I want to go, I do not know. Egypt. Tunisia. South America. India maybe. I do not know. Maybe Africa". And when asked about what attracts him to this idea, he suddenly points out: "To see something different. Meet different people. I have only been once outside of Europe so far and that was in Morocco. I would like to go somewhere else and get to know other people. Also, I would like to learn a new language, or something. Find someone I could talk to again and have something to tell the people".

proposed a four-category attachment style model: Individuals are either characterized by a "secure" attachment style (positive self and positive other) or by one of three "insecure" attachment styles: "preoccupied", "fearful-avoidant", and "dismissing avoidant" (Bartholomew & Shaver, 1998). Individuals with "fearful-avoidant" attachment (negative self and negative other) regard others as unavailable and uncaring, and themselves as unlikable, whereas those with "dismissing-avoidant" attachment (positive self and negative other) distance themselves from others and regard themselves as self-sufficient. Linking this model to our findings that participants with low scores on the interpersonal problem scale "cold" showed higher impairments in psychosocial function, one might assume that these subjects have a "fearful-avoidant" attachment style, characterized by fear of intimacy and the tendency to social avoidance. Individuals with high scores on the "cold" scale, on the other hand, would fit the description of people with "dismissing-avoidant" attachment, which might explain the lesser impairment in psychosocial functioning. Previous research indicated that patients with "fearful-avoidant" attachment styles showed a strong dependency upon others to maintain a positive feeling of self-esteem, while seeming to lack readiness to become involved in close relationships and tending to distance themselves in order to avoid distress (Ponizovsky, Vitenberg, Baumgarten-Katz, & Grinshpoon, 2013). Results of a study using the Psychosis Attachment Measure (Berry, Wearden, Barrowclough, & Liversidge, 2006) suggest that high levels of attachment anxiety and avoidance are positively associated with interpersonal problems and that avoidance of attachment is related to problems in therapeutic relationships (Berry et al., 2008).

Overall, our findings illustrate that individuals with non-affective psychoses, who are emotionally responsive and have a desire to affiliate with others, but act in an avoiding manner at the same time, show the highest degree of functional impairment. Respective clinical interventions might on the one hand allow for an implicit experience of a tolerable, "non-dilemmatic" relationship in the therapeutic context and focus on an increasingly explicit identification of maladaptive interpersonal schemas on the other. Importantly, a distant or "cold" attitude should be not be challenged too early by the therapist, thus observing Mentzos' approach of a "respectful distance" and trying to mitigate a dilemmatic interpersonal position first (Mentzos, 2009, p. 232).

A body of evidence supports the efficacy of complex social cognitive interventions and skills trainings to improve psychosocial functioning (Kurtz, Gagen, Rocha, Machado, & Penn, 2016). Also, cognitive behavioural therapy is concerned with reducing behavioural symptoms like avoidance and withdrawal, although expectations about its superiority regarding negative symptoms and social functioning had to be dampened (Jones et al., 2018). On the basis of robust evidence regarding family interventions (Pharoah, Mari, Rathbone, & Wong, 2010), and first naturalistic studies on psychodynamic approaches (Rosenbaum et al., 2012), we would like to speculate that psychosocial dysfunction and interpersonal problems in psychoses might also respond to more interpersonally centred types of interventions. Focusing on interpersonal problems by explicit training, but also by implicit or indirect approaches, may therefore bear potential to treat psychosocial dysfunction, depending on acuteness, illness-phase and patients' preferences.

Limitations of the present study comprise the use of self-rating instruments to measure interpersonal problems and the cross-sectional design. Further research should include potential mediating factors, such as self-esteem, self-efficacy, attachment style, and

synthetic metacognition, as well as behavioural measures of interpersonal problems. With regard to psychosocial functioning, an additional, external assessment could have increased ecological validity of our study. Moreover, there is lack of empirical evidence supporting the theoretical concept of the "psychotic dilemma" by Mentzos, and corroborating the efficacy of psychodynamic treatments for psychoses, thus forming an imperative for future research (Deutsche Gesellschaft für Psychiatrie, Psychotherapie und Nervenheilkunde, 2019; Mentzos, 2009; National Institute for Health and Care Excellence, 2014). Questions have to be raised whether it is possible to associate the concept of an unconscious disposition ("psychotic dilemma") with the patients' explicit report of interpersonal problems. However, behavioural consequences of this "dilemma" can be perceived as both in psychotherapy—as implicit interpersonal regulatory processes and eventually as explicit insights.

In summary, our findings highlight the potential clinical relevance of an assessment of interpersonal dysfunction for the treatment of patients with schizophrenia spectrum disorders. Type and level of interpersonal problems may prove to be an important attribute that could guide psychotherapeutic processes and predict their outcome. Promising clinical treatment approaches have been considered, and it remains to be determined, whether a psychodynamic approach, focusing on subtle interpersonal regulatory processes, will be effective in mitigating Mentzos' "dilemma", as well as respective functional impairments in people with non-affective psychoses.

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CONFLICT OF INTEREST

The authors report no conflict of interest.

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