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Dimensions of the typus melancholicus personality type

■ **Abstract** The Typus melancholicus personality type (TMP) is characterised by orderliness, conscientiousness and interpersonal dependence. Several standardised instruments have been developed for the assessment of the Typus melancholicus personality. To date there has been no systematic comparison of these instruments and in particular it has been unclear whether TMP represents a single trait or a personality trait constellation. The aim of this study was the comparison of four TMP questionnaires and the investigation of the dimensionality of the personality as revealed by these questionnaires. The factorial validity of four TMP questionnaires was examined based on a sample of n = 264 psychiatric inpatients and normal controls. In a factor analysis of the items of the TMP questionnaires, four dimensions could be differentiated: Dependence, Intolerance of Ambiguity, Norm-Orientation, and Perfectionism. Psychometric evaluation showed good values for the individual items and the new TMP scales. The four subscales had a differential correlation profile in relation to the dimensions of the five-factor model of personality. The TMP scales could distinguish a group of depressed patients from a group of normal controls. The results show that TMP personality is not a single trait but consists of four related but separate traits. These can be clearly distinguished from those of the five-factor model of personality. The analysis of the TM concept therefore also represents a theoretical perspective for the integration of the personality characteristics which are relevant for depression. Based on this analysis, we constructed a multidimensional TMP inventory which forms the basis for the investigation of the effect of TM personality on clinical outcome and on psychotherapeutic treatment.

■ **Key words** Typus melancholicus personality · five-factor model of personality · depression · test validation

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Introduction

Personality traits are significant factors in depression (von Zerssen 1996; Klein et al. 1993). A wealth of empirical results has been obtained on the significance of personality traits for the development and course of affective disorders (Clayton et al. 1994; Maier et al. 1995; Lauer et al. 1997; Maj 1994; Shea 1990; Ilardi et al. 1997; Alnes and Torgersen 1997). Apart from single personality traits, personality constellations typical of depression have been described (Akiskal 1990; Cloninger 1999; Blatt et al. 1995; Beck 1983; Hirschfeld 1994; Philipps 1990). One of these concepts of pre- and intermorbid personality is Tellenbach's Typus melancholicus personality type (Stanghellini and Mundt 1997; Sato et al. 1996). Tellenbach (1961) described a pre- and intermorbid personality characteristic of depressives, the main features of which were orderliness and conscientiousness. Kraus (1977) subsequently reformulated the TMP concept in terms of Mead's theory of social role (1934) and of Frenkel-Brunswik's (1949) studies of tolerance versus intolerance of ambiguity. According to Kraus (1977) the TM personality follows role expectations, is more externally than internally determined in the sense of interpersonal dependence, and is intolerant of emotional and cognitive ambiguity.

In several studies using various TM inventories, between 30 and 70 % of depressed patients have been found to have the typical TM personality structure (Sauer et al. 1989; Pössel and von Zerssen 1990; Sato et al.

1992, 1993; Fukunushi et al. 1993; Tölle 1987; Mundt et al. 1997; von Zerssen 1994; Nakanishi et al. 1993). These studies have supported the hypothesis that TMP is typical of, but not specific for, patients with major depression. In high-risk studies of relatives of depressed subjects there was not only an excess of neuroticism and increased rigidity (Lauer et al. 1997; Maier et al. 1992) but also an accumulation of people with a Typus melancholicus personality (Hecht et al. 1998). Regarding the significance of the TMP concept for the long-term outcome of depression, there have been three studies to date. Nakanishi et al. (1993) found Typus melancholicus personality to predict an unfavourable course, while Marneros et al. (1991) and Kronmüller et al. (2002) found the TMP structure rather to be protective.

Initial research on the TM personality structure used phenomenological methodology but more recently various standardised instruments have been developed. Von Zerssen developed the F-list (von Zerssen 1969) as a TMP questionnaire and the Biographical Personality Interview (BPI, von Zerssen 1994) as an expert-rated TMP measure. Since the F-list is relatively bulky, two shorter questionnaires were developed: the Kasahara scale (Kasahara 1984) and the Depression Related Personality Scale (DRP; Yoshimatsu et al. 1989). The Tolerance of Ambiguity scale (AT-14; Kiskal 1984) was not designed especially for the assessment of TMP, but does measure ambiguity-intolerance as elaborated by Kraus (1977). All of these instruments have been evaluated as reliable. Comparisons between individual instruments are only available regarding the F-list and the Kasahara scale. Three studies reported correlations from 0.45 to 0.69 between the F-list and the Kasahara scale (Furakawa et al. 1998; Sato et al. 1992; Sakado et al. 1992). Only in one study was the concurrent validity of four TMP inventories examined. These four TMP scales correlated moderately between 0.20 and 0.46 (Kronmüller et al. in press). This indicates that the instruments measure a common core area of the TMP-concept but that the individual TMP inventories reflect different facets of the TM personality.

Furthermore several studies were able to show that the Typus melancholicus personality should be regarded as an independent entity compared to various personality disorders and classical personality traits (Sato et al. 1994; Mundt et al. 1997). In a validation study by Furukawa et al. (1998) it was shown that the TMP dimension is distinct from the five-factor model of personality. TMP scales were characterised by higher correlations with Conscientiousness, Agreeableness and Extroversion. Similar results were obtained by von Zerssen (1996), who found TMP traits to correlate negatively with Aggressiveness and Extraversion and positively with Conscientiousness and Rigidity, while Hecht et al. (1997) found that TMP traits assessed with the Biographical Personality Interview (BPI) correlated negatively with both Extroversion and Frustration tolerance but not with Rigidity. In a validation study including four TMP inventories it was shown that the TMP scales had different correlation patterns in relationship to the dimensions of the five-factor model of personality (Kronmüller et al. in press). The TMP inventories showed high concordance in that the highest correlation coefficients were found for Conscientiousness, which represents one of the core features of the TMP concept. However there were differences in the pattern of correlations for the four other essential features of the five-factor model of personality. Despite the consensus of these findings, the validation of the TMP concept in relation to the five-factor model was not unanimous. Nevertheless it can be assumed that the TMP dimension can be distinguished from the five-factor model (Furukawa et al. 1998).

The common characteristic of the existing TMP instruments is their uni-dimensionality. The TMP concept, however, features many dimensions, reflecting a complex type. Based on TMP theory, it could be expected that TMP concerns a multidimensional characteristic or set of characteristics. To date there have been no factor analytical examinations of TMP scales. A priori the uni-dimensionality of the concept and of the measuring instruments was assumed. However, Matussek and Feil (1980) extracted four factors in single factor analysis of the two scales of the F-list (Typus melancholicus, Typus manicus). These four factors or subscales were named 'Feelings of guilt and inferiority, fears of loss', 'Subordination to order and authority', 'Contact avoidance and contact inability' and 'Lack of self-assertiveness and responsibility'. Matussek and Feils' (1980) findings indicate that the F-list as well as the Typus melancholicus dimension of the F-list consist of heterogeneous personality traits. The extent to which this dimensional structure is also valid for the other TMP inventories is unclear.

The aim of this study was to investigate the dimensionality of TMP inventories and to determine the degree to which different personality facets can be defined as TMP subdimensions. The psychometric properties of the subdimensions were tested. Another aim was to investigate the relationship between the TM personality dimensions and the personality traits of the five-factor model and to examine whether depressed patients and normal controls differed regarding TMP traits.

Methods

Subjects

In the study n = 264 subjects were included, of with 200 were psychiatric patients and 64 were healthy controls.

Patients. The subjects were N = 200 consecutively admitted in-patients of the Psychiatric Department of the University of Heidelberg. Patients with dementia or addiction were excluded. Of these, 115 (57.5 %) were female and 85 (42.5 %) were male. Age ranged between 18 and 85 years (m = 41.57; SD = 12.74). Regarding marital status, 31 % were single, 43 % married, 5.5 % separated, 15.3 % divorced and 4 % widowed. 79 (39.5 %) patients had a high level (at least 10 years) of education, the remaining 121 (60.5 %) had a low level of education. Almost half (44.8 %) were in full-time employment, 11.3 % were housekeepers, 16.5 % were unemployed, 4.1 % were students and 11.9 %

were retired. Eighteen patients declined to take part in the study. There was no evidence of a systematic selection effect.

■ **Diagnoses.** The patients were diagnosed according to the International Classification of Diseases (ICD-10) (WHO 1992) by experienced psychiatrists on the basis of a clinical interview. 85 (42.5%) patients fit the criteria for unipolar depressive episode, of which 19 were first episode, and 66 had at least one previous episode. 18 (9%) met criteria for bipolar affective disorder, 41 (20.5%) had schizophrenia and 14 (7%) had schizoaffective disorder. There were 18 (9%) patients with personality disorder and 24 (12%) with an anxiety and neurotic disorder. The patients with unipolar depression were compared to the healthy controls. There were no significant sociodemographic differences between the two groups. Severity of current depression as a possible confounder was controlled by the Beck Depression Inventory (BDI).

■ **Control.** The control subjects consisted of N = 64 people aged between 19 and 75 years (m = 43.38, SD = 12.62) without a history of psychiatric disorder. Of the 43 women and 21 men, 25 (39.1%) were single, 31 (48.4%) married, 7 (10.9%) separated and one (1.6%) divorced. 34 (53.1%) were in full-time employment, 13 (20.3%) were students, 8 (12.5%) were housekeepers and 7 (10.9%) retired. The random sample was mainly recruited from course participants at an adult education center. There were no significant differences in the socio-demographic characteristics of the patients and the control group.

■ **Instruments**

We used four different questionnaires to assess TM personality features. Personality dimensions were assessed at the end of the index episode shortly before discharge from the ward, when acute symptoms had remitted. All personality questionnaires were administered with the instruction to answer the questions according to the premorbid state as done in von Zerssen's instruction (von Zerssen et al. 1988). The symptoms were also measured with the Beck Depression Inventory (BDI) (Beck et al. 1961) and the Symptom Checklist 90 (SCL-90-R) (Derogatis 1996; Franke 1995).

The F-list (von Zerssen 1969) consists of 104 items, of which 66 items measure TMP trait and 53 items measure Kretschmer's cyclothymic temperament. The F-list has been well validated (Mattussek and Feil 1980; Mattussek and Wolfgang 1983; von Zerssen 1969). The content validity of the two subscales was established by several experts including Tellenbach himself. The items are rated on a four-point scale with 34 reversed items and 8 items given twofold weighting to reflect their relative importance in delineating TMP. The F-list is available in several languages (von Zerssen 1996; Furukawa et al. 1998) and has been used in several studies. In this study, we used 66 items that form the TMP scale.

The Depression Related Personality Trait Scale (DRP) is a self-rating scale designed by Yoshimatsu et al. (1989), which bears some resemblance to the F-list. It consists of 19 items which assess the core properties of Tellenbach's Typus melancholicus: orderliness, conscientiousness and norm-orientation. The items are rated on a four-point scale; there are no reversed items. The questionnaire has high construct validity and reliability (Miguchi et al. 1990).

Each of the 15-items of the Kasahara scale is rated on a dichotomous scale and there are no reversed items. This scale has been used alone or in combination with the F-list. The Kasahara scale has good internal consistency (Sato et al. 1992; Furukawa et al. 1998). In comparison studies, Sato et al. (Sato et al. 1994) found that the Kasahara scale was significantly more specific than the F-list in distinguishing depressed patients from normal controls, although both scales exhibited similar sensitivity. The Kasahara scale and the F-list showed moderate correlations (Furukawa et al. 1998; Sato et al. 1992; Sakado et al. 1992). The original English version of the Depression Related Personality Trait Scale and the Kasahara scale were translated into German by the Heidelberg Depression Research Group, and the semantic equivalence to the original was ascertained by back-translation.

The 14-item Ambiguity Tolerance Scale (AT-14) was developed by Kischkel (1984) and is based on English-version scales. The AT-14 is designed to assess distress caused by contradictory information (Heerlein and Richter 1991). Each item is rated on a 5-point scale. Kischkel (1984) reported good internal consistency as well as external and discriminative validity. Because of considerations of content, the polarity of the AT-14 was reversed in this study in the direction of Intolerance of Ambiguity (AIT-14).

Von Zerssen's (1994) Six Factor Test (SFT) is a multi-dimensional questionnaire based on the five-factor model of personality. The 55 items assess the personality traits Extraversion, Conscientiousness, Neuroticism, Aggressivity, Openness to experience, and Religiousness, the latter being a moderator variable influencing onset and course of depressive episodes (von Zerssen 1994). In addition, the SFT contains a control scale. This scale reflects the subjects Motivation to fulfil the test instruction adequately. Patients are asked to imagine themselves in times of well-being, in a state of physical and mental health and to answer the items accordingly. Good internal consistency as well as external and discriminative validity have been demonstrated (von Zerssen 1994).

■ **Statistical analysis**

For the determination of the factorial structure of the items, a factor analysis based on principal component analysis with subsequent orthogonal varimax rotation was carried out. The determination of the number of factors resulted from application of the scree test, the Kaiser-Guttman Criterium and Horn's method (1965) for the simulation of random variables. For item analysis of the inventories, facility-values and corrected item-total correlations were calculated (Nunnally 1978). Cronbach's Alpha coefficients were calculated as a measure of reliability. The t-test was used for univariate analysis of group differences. To control for the effects of current depressive symptoms analysis of covariance was used. The Pearson correlation coefficients were determined for correlation analysis. The significance level for univariate analysis was fixed at 0.05. For evaluating multivariate effects, the statistical model of logistic regression with a stepwise regression was used. The variables selected with this procedure had to show overall significance to diagnostic classification. Then the entry level of the selected variables was set at 0.15. All analyses were carried out with SAS (SAS Version 6.121998).

Results

■ **Factor analysis of TMP inventories items**

The construct validity of the TMP inventories was tested by performing a single factor analysis on the items of the four questionnaires. As an initial step, items were excluded by item analysis. Thereby a reduction to 26 items was achieved. Principal components factor analyses with orthogonal varimax rotation was used. Six of the factors had an eigenvalue greater than 1 and explained a total of 54.4% of the variance in the data. The scree test and Horn's test (1965) suggested a four-factor solution as the optimal representation of the data. This four-factor solution explained a total of 45.4% of the variance (Table 1).

The factor solution approximated simple structure relatively well. The four factors each account for approximately the same proportion of variance. The factors can be labelled as Dependence, Intolerance of ambiguity, Norm-orientation, and Perfectionism and form the scales of the Typus Melancholicus Personality Inventory (TMPI) (Appendix 1).

The factor Dependence is formed by 8 items, and rep-

Table 1 Factor analysis of TMP inventories (N = 264)

	Items	Factor loadings	Communalities	Variance explained (%)
TMPI-1: Dependence	8	0.46–0.62	0.34–0.65	12.3
TMPI-2: Intolerance of ambiguity	6	0.48–0.77	0.27–0.61	11.2
TMPI-3: Norm-orientation	5	0.62–0.80	0.34–0.65	11.1
TMPI-4: Perfectionism	7	0.46–0.77	0.36–0.66	10.8

resents a pattern of interpersonal orientation to others. Intolerance of ambiguity is a sort of depressive information processing and indicates a pattern by which ambiguities are avoided. This factor is reflected by six items. Norm-orientation indicates a personality characteristic by which people are strongly oriented towards social rules as well as moral points of view. Perfectionism is indicated by seven items, which describe a pattern of orderly, perfectionistic behaviour and attitudes.

Reliability of the TMPI dimensions

In the psychometric evaluation of the four TMPI scales, the facility values, the item-total correlations and Cronbach's alpha were calculated. To clarify the relationship between the individual dimensions, the intercorrelations of the TMPI scales were determined. The relationship between the new TMPI dimensions and the original TMP inventories was also examined.

The psychometric evaluation of the TMPI scales showed satisfactory to good characteristics for the facility values and the item-total correlations (Table 2). In order to examine the internal consistency Cronbach's alpha coefficients were calculated. The coefficients of the four TMPI scales were hence considered adequate.

The intercorrelations of the individual TMPI scales

were low and non-significant with the exception of the factor Perfectionism which correlated moderately with each of the other three dimensions (Table 3).

In the comparison of the new TMPI dimensions with the original TMP inventories, the new TMPI total score showed moderate to high correlation with the original TMP inventories (Table 4). However, the TMPI subscales had a differential pattern of correlation compared to the original TMP inventories. The factor Dependence had the highest correlation with the F-list. The factor Intolerance of ambiguity correlated significantly with the AIT-14 only. The factor Norm-orientation correlated higher with the DRP scale and the Kasahara scale than with the F-list and the AIT-14. The factor Perfectionism showed high correlation with the DRP scale.

Table 4 Comparison of TMPI scales and TMP inventories (N = 264)

	DRP	K-scale	F-list	AIT-14
TMPI: Total score	0.74***	0.55***	0.57***	0.60***
TMPI-1: Dependence	0.40***	0.53***	0.69***	0.21
TMPI-2: Intolerance of ambiguity	0.24	0.12	0.14	0.88***
TMPI-3: Norm-orientation	0.43***	0.37**	0.20***	0.04
TMPI-4: Perfectionism	0.90***	0.31***	0.26***	0.30***

* p < 0.05; ** p < 0.01; *** p < 0.001

Table 2 Item analysis and Cronbach's Alpha of TMPI items and scales (N = 264)

	Items	M	SD	P_s	r_{it}	α
TMPI: Total score	26	2.59	0.44	0.58	0.48	0.81
TMPI-1: Dependence	8	0.65	0.23	0.59	0.40	0.72
TMPI-2: Intolerance of ambiguity	6	0.44	0.19	0.54	0.52	0.77
TMPI-3: Norm-orientation	5	0.85	0.15	0.51	0.54	0.77
TMPI-4: Perfectionism	7	0.64	0.13	0.64	0.49	0.76

M mean; *SD* standard deviation; P_s average facility value; r_{it} average corrected item-total correlation; α Cronbach's alpha

Table 3 Intercorrelations of TMPI scales (N = 264)

	TMPI-1 Dependence	TMPI-2 Intolerance of ambiguity	TMPI-3 Norm-orientation	TMPI-4 Perfectionism
TMPI: Total score	0.72***	0.59***	0.46***	0.68***
TMPI-1		0.15*	0.10	0.34***
TMPI-2			0.03	0.25***
TMPI-3				0.27***

* p < 0.05; ** p < 0.01; *** p < 0.001

Validation TMPI-dimension and the big five model of personality

The new TMPI scales were compared with the personality traits of the five-factor model of personality (Six Factor Test, SFT) (Table 5). The TMPI total score correlated highly significantly with Conscientiousness and moderately with Neuroticism and Openness. There was a significant negative correlation with Aggressivity. This pattern is more complex for the individual TMPI scales. Thus Dependence (TMPI-1) correlated highly with Neuroticism, to a lesser degree with Conscientiousness and Openness, and negatively with Aggressivity. Intolerance of ambiguity (TMPI-2) showed less correlation with the five-factor model of personality. Norm-orientation (TMPI-3) was characterised by a high correlation with Conscientiousness and a negative correlation with Neuroticism and Aggressivity. Perfectionism (TMPI-4) correlated highly with Conscientiousness, Openness and Neuroticism. None of the TMPI scales showed substantial correlations with Extraversion or with the Motivation scale of the SFT.

Clinical validation of TMPI dimensions

Finally the TMPI dimensions were examined on the basis of sociodemographic and clinical characteristics. Current depressivity and degree of psychic disturbance were explored as possible confounding factors, and the comparison of a group of depressed patients with a group of normal controls was carried out. There was a significant correlation between age and TMPI total-score ($r = 0.11$, $p = 0.04$), due to the correlation between age and Intolerance of ambiguity (TMPI-2) ($r = 0.23$, $p = 0.001$). There was no significant correlation between age and the other three TMPI scales. There was no significant sex difference for any of the TMPI scales. The Pearson correlation coefficient between the TMPI scales and the Beck Depression Inventory (BDI) was between 0.08 and 0.35. The correlation of the TMPI scales with the total score of the SCL-90 was between 0.03 and 0.31. The comparison of the TMPI total-score and the individual TMPI scales between a group of patients with major depression and a group of normal controls using t-test showed significant differences for all TMPI dimensions (Table 6).

These differences remain significant even when current depressivity (BDI) was controlled for by an analysis of covariance. Using multivariate logistic regression the segregation of the two groups was calculated for all TMPI subscales. In an optimal logistic regression model ($chi = 36.18$; $p = 0.001$) all four TMPI subscales were selected. Using this model, 77% of the patients and of the control group could be correctly reclassified according to diagnostic group.

Discussion

In the framework of the Heidelberg study on the personality structure of patients with major depression four different questionnaires on the Typus melancholicus personality (TMP) were compared and investigated with respect to their common dimensional structure. It has been thought that the TMP concept is not a single

Table 5 Correlations between TMPI scales and SFT dimensions (N = 264)

	E	N	C	A	O	R	M
TMPI score	−0.06	0.35***	0.52***	−0.16*	0.29***	0.19**	−0.08
TMPI-1: Dependence	−0.14*	0.47***	0.27***	−0.17	0.24**	0.21**	−0.14*
TMPI-2: Intolerance of ambiguity	−0.12	0.18	0.18	0.02	0.14	0.03	−0.09
TMPI-3: Norm-orientation	0.05	−0.21**	0.41***	−0.29***	−0.02	0.03	0.09
TMPI-4: Perfectionism	0.11	0.29***	0.49***	0.06	0.35***	0.18**	−0.01

E Extraversion; *N* Neuroticism; *C* Conscientiousness; *A* Aggressivity; *O* Openness; *R* Religiousness; *M* Motivation
* p < 0.05; ** p < 0.01; *** p < 0.001

Table 6 Comparison of TMPI-scales of depressed patients and normal controls

	Major Depression (n = 85)		Normal Controls (n = 64)			
	M	SD	M	SD	t	p
TMPI Total	2.68	0.43	2.40	0.37	4.00	0.001***
TMPI 1: Dependence	0.69	0.22	0.55	0.23	3.77	0.001***
TMPI 2: Intolerance of ambiguity	0.49	0.18	0.38	0.20	3.57	0.001***
TMPI 3: Norm-orientation	0.89	0.10	0.84	0.16	2.28	0.024*
TMPI 4: Perfectionism	0.66	0.13	0.59	0.12	3.54	0.001***

M mean; *SD* standard deviation
* p < 0.05; ** p < 0.01; *** p < 0.001

personality trait but a complex personality constellation composed of multiple personality facets (Matussek and Feil 1980; Furakawa et al. 1998). Regarding concurrent validity there were only moderate correlations between TMP inventories (Furakawa et al. 1998; Sato et al. 1992; Sakado et al. 1992; Kronmüller et al. in press). The TMP scales developed to date have not taken these findings into consideration and all the TMP instruments to date have been developed as uni-dimensional scales. This presumption of single dimensionality has not been tested by factor analysis.

In the framework of this study, the four different TMP inventories were subjected to a common factor analysis. Following the scree test a four factor solution emerged as the optimal representation of the data. These four factors explained approximately similar proportions of the variance and together almost half of the total variance. The resulting factors were labelled as Dependence, Intolerance of ambiguity, Norm-orientation and Perfectionism. Two of these factors show resemblance to the factors of the F-list described by Matussek and Feil (1980): 'Lack of self-assertiveness and responsibility' is similar to the TMPI factor Dependence and 'Subordination to law and authority' to the TMPI factor Norm-orientation. For Matussek and Feil's (1980) factors 'Feeling of guilt and inferiority, fears of loss' and 'Contact avoidance and contact inability' there were no TMPI counterparts. The nomenclature of the factors shows the strong interpersonal orientation of the F-list. Further similarities are ascertainable between the TMPI and the Dysfunctional Attitude Scale (DAS; Weissman and Beck 1978). Hautzinger et al. (1985) were able to show that the DAS is composed of three dimensions. These show certain similarity with the scales of the TMPI but Norm-orientation is not represented by the DAS. There are also similarities to Dyck's (1992) subscale formation of the DAS. In future studies a mutual validation of both instruments should be undertaken. With the Typus melancholicus personality concept and its empirical results it is possible to integrate concepts like perfectionism (Blatt 1995), dependence (Nitzel and Harris 1990), sociotropy and autonomy (Beck et al. 1983) and depressive dysfunctional attitudes (Weissman and Beck 1978). The concept of Norm-orientation has been relatively neglected in the literature. The TMP concept offers a theoretical perspective under which different personality concepts of depression could be unified. The sub-differentiation of the TMP succeeds in more exactly subsuming the conceptual overlaps and differences regarding other approaches.

The psychometric evaluation of the individual TMPI dimensions showed good item statistics and good values for the internal consistency of the scales. It can thus be assumed that the TMPI is a reliable inventory. Persisting intercorrelations between the individual TMPI factors and the scree test indicate that it is sensible to generate a TMPI total-score. This TMPI total-score shows high correlation with all other TMP inventories and is more highly correlated to each than the original TMP inventories among themselves. This indicates that in subsequent investigations the results that are achieved with the TMPI are comparable with the results of other studies in which another TMP instrument was used.

For validation, the individual TMPI factors were compared with the scores of the original TMP scales. The individual TMP inventories emphasise different aspects of the TM personality. The factor Dependence shows the highest correlation with the F-list. This result as well as the results of the factor analytical study of Matussek and Feil (1980) indicates that the F-list strongly stresses the interpersonal aspects of the Typus melancholicus concept. The factor Intolerance of ambiguity correlated significantly only with the AIT-14. That means that in the existing TMP inventories this cognitive style of information processing is not taken into account. The factor Norm-orientation correlates clearly higher with the DRP and Kasahara scale than with the F-list or the AIT-14. The factor Perfectionism correlated very highly with the DRP. The only moderate intercorrelations among the TMP inventories is thus explained – the different TMP inventories emphasise different facets of the TMP concept.

A further step in validation was the comparison of the TMP questionnaires with the five-factor model of personality. The TMPI total-score correlated highly significantly with Conscientiousness, and moderately with Neuroticism, and Openness. There was a negative correlation with Aggressivity. These results are as expected since Typus melancholicus traits include love of orderliness and devotion to significant others. This pattern tallies largely with that of Furakawa et al. (1998) for the F-list and the Kasahara scale. However, in contrast to Furakawa et al. (1998), in this study there was a significant positive correlation of TMP with Neuroticism, but on the other hand no significant correlation between TMPI total-score and Extroversion. This result is in accordance, however, with the findings of von Zerssen (1996). This pattern is further differentiated for the TMP subscales. Thus there were expected correlations of the four TMPI scales with the five-factor model of personality. Lack of correlations with the factor Intolerance of ambiguity indicates that this characteristic is not represented in the five-factor model. Furthermore, none of the TMPI scales showed substantial correlation with the Motivation factor of the SFT.

For the total score of the TMPI there was a significant correlation with age. This finding is in agreement with the result of Sato et al. (1994). However this result is further differentiated in the present study. Age correlates with the trait Intolerance of ambiguity, a correlation that increases with increasing age, but age does not correlate with the other three TMPI scales. As in other studies (Sato et al. 1993), no sex difference was observed for the TMPI scales. The comparison of a random sample of patients with major depression and a group of normal controls showed significant differences as expected for all TMPI scales. This effect was stable after controlling for current depressivity and was not attributable to con-

founding effects. In a multivariate analysis, it was shown that in an optimal logistic regression model for the separation of patient and control groups, all TMPI scales were selected, indicating that each of these scales forms an independent facet of the TMP concept.

The current study is subject to certain methodological limitations. The psychometric analysis was performed on a heterogeneous random sample of psychiatric in-patients. These patients represent only a small proportion of depressed subjects. In further studies, out-patients and high-risk populations should be included in validation. It is possible that not every patient especially those with schizophrenia understood the instruction to answer the questions according to the premorbid state. Several studies showed, however, that there were no significant differences obtained between instructing patients to answer according to premorbid or current state. Another problem is that some patients were only partially remitted especially patients with personality disorders. Comparisons of patients with different psychiatric disorders are needed.

In further studies, TMPI-questionnaires should also be validated through the Biographical Personality Interview (BPI) of von Zerssen (1996). The depressive personality disorder could be further elucidated by the Typus melancholicus personality concept. This study is a cross-sectional study and allows no theory on the etiological significance of the TMP concept. In the future we would like to conduct longitudinal studies. This would also help to determine whether TM personality changes over time and relative to course of disorder. Presently a Japanese and a Romanian version of the Typus Melancholicus Personality Inventory (TMPI) are available in addition to the German and English versions. Through the more detailed description and the better understanding of the TM personality, the psychotherapeutic treatment of these patients could be better matched to their specific personality and needs.

Conclusions

The results of this study show that different available TMP questionnaires do not assess the same concept but a single common core of significance. They emphasise different facets of the TM personality. We conclude that Typus melancholicus is not a personality trait but a personality trait constellation. In this study, four subscales of the TMP concept were differentiated. This subdifferentiation of the TMP concept shows overlaps with a set of personality characteristics relevant in depression. The TMP concept could thus represent a framework theory for the integration of these characteristics. Based on this analysis a multidimensional TMP inventory the Typus Melancholicus Personality Inventory (TMPI) was constructed which forms the basis for the investigation of the effect of TM personality on clinical outcome and on psychotherapeutic treatment. For the psychotherapeutic management of depression, there is the possibility to select particular treatment techniques for particular TMP characteristics and also to develop new treatment techniques. These techniques could contribute to the psychotherapeutic management of depressed patients (Mundt 1998) through the further differentiation of the particular personality facets.

Appendix 1:
Typus Melancholicus Personality Inventory (TMPI)

1. With every important task, I want to know how long it will take (TMPI 2, AT-14 Item 7)
2. I am the sort who can't refuse when people ask me to do something (TMPI 1, K-scale Item 6)
3. I am the industrious/hard-working type (TMPI 4, DRP Item 1)
4. I always tend to be self-sacrificing in my conduct toward other people (TMPI 4, DRP Item 3)
5. I have a strong sense of responsibility (TMPI 3, K-scale Item 3)
6. Problems don't appeal to me if I don't know there is a solution (TMPI 2, AT-14 Item 9)
7. I tend to be very careful with people and worry about them a lot (TMPI 4, DRP Item 8)
8. I can't mentally be happy unless things are done to absolute perfection (TMPI 4, DRP Item 12)
9. In objectively justified matters, I get my own way, even if others dislike me for it (TMPI 1 item reversed, F-list Item 24)
10. I don't like to join in with a group if I'm not sure that their work will be successful (TMPI 2, AT-14 Item 10)
11. I can get very worked up, getting easily carried away in my enthusiasm and zeal (TMPI 4, DRP Item 15)
12. I take my social responsibilities very seriously (TMPI 3, K-scale Item 4)
13. I feel uneasy when a decision has to be made, and there isn't enough information available (TMPI 2, AT-14 Item 11)
14. I have a very sensitive conscience and feel guilty easily (TMPI 1, F-list Item 36)
15. I don't like to deal with a question if I don't see any possibility to get a definite answer (TMPI 2, AT-14 Item 12)
16. I am honest (TMPI 3, DRP Item 4)
17. I would rather avoid confrontation with anybody (TMPI 1, F-list Item 37)
18. I only tackle a more complex problem if I have a clear idea of its meaning and consequences (TMPI 2, AT-14 Item13)
19. It's especially unpleasant for me to be dragged into other people's quarrels (TMPI 1, F-list Item 40)
20. I am a perfectionist (TMPI 4, DRP Item 16)
21. I have a tendency to easily blame myself (TMPI 1 item reversed, F-list Item 65)
22. I tend to be absolutely thorough, and want to see things done to the bitter end (TMPI 4, DRP Item 17)
23. I have a rather strong sense of responsibility (TMPI 3, DRP Item 5)
24. I make a big effort to be or rather to contain myself so that others can really like me (TMPI 1, DRP Item 7)
25. I am sincere (TMPI 3, DRP Item 10)
26. It's very important to me to get along well with everyone (TMPI 1, DRP Item 19)

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