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Typus melancholicus in light of the five-factor model of personality

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Abstract The present paper examines Typus melancholicus (TM), which is widely accepted as premorbid personality of depression in Germany and Japan, from the viewpoint of the five-factor model of personality, which has recently been gaining international popularity as the comprehensive model of personality traits. Two measures of TM, von Zerssen's F-list and Kasahara's scale, as well as the personality questionnaire for the five-factor model, NEO Five Factor Inventory, were completed for 140 consecutive psychiatric outpatients by their close relatives. It was found that (a) the two measures of TM had good internal consistency reliability, (b) they had reasonable concurrent validity, and (c) TM was characterized by high Conscientiousness, high Agreeableness and, to a lesser degree, high Extraversion. The results were largely in agreement with theoretical prediction and provide further support to the construct validity of the TM measures. Whether combining the three personality traits into one type is meaningful in depicting a particular premorbid personality constellation awaits further empirical examination.

Key words Typus melancholicus · Five-factor model of personality · Premorbid personality · Relatives rating

Introduction

It has long been clinical wisdom that patients with mood disorder have some typical premorbid personality traits, which may represent their vulnerability to the disorder or some mitigated form of the disorder itself. Some classical

examples include Kretschmer's cyclothymic temperament (Kretschmer 1921), the oral and anal character according to the psychoanalytic theory (Mendelson 1976), and Tellenbach's Typus melancholicus (Tellenbach 1961). Tellenbach described the premorbid personality of patients with unipolar endogenous depression as orderly, devoted to duty and to family members, and scrupulous. The last concept has been popular in Germany, where it was originally proposed, and in Japan, partly because it corresponded very closely to a clinical type described as immodithymia by a Japanese psychiatrist Shimoda (1932) several decades earlier (Kraus 1971).

The empirical examinations of the premorbid personality of mood disorder patients have only taken place in the past three decades. In the literature we can find two divergent ways of approaching this issue; one is to use the established personality inventory, such as the Maudsley Personality Inventory (Eysenck 1947), or the Minnesota Multiphasic Personality Inventory (Hathaway and McKinley 1951), originally developed and standardized in the general population; the other is to apply the typological characterization that emerged from clinical observations. A more refined way of the latter kind, which requires considerable effort and is therefore seldom practiced, is to develop a psychometrically sound test corresponding to the clinical concept at hand. Two good examples include von Zerssen's (1969) F-list to measure Typus melancholicus and cyclothymic temperament and Beck's sociotropy-autonomy scale to measure the proposed two vulnerability factors for depression and anxiety (Beck et al. 1983).

It is very important to operationalize the clinical concept first described by astute psychiatrists based on what one might argue is a biased observation of a highly selected sample. Thus, without relying on the operationalized definition of Typus melancholicus, Bochnik (1969) measured "orderliness," "Remanenz", and "Inkludenz" among college students, whereas Tellenbach (1969) counterargued that "Remanenz" and "Inkludenz" are not personality traits but instead are dynamic situational concepts. More recently, it was reported that, in an exercise to dichotomize endogenous depressive patients into Typus

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melancholicus vs non-Typus melancholicus, one expert rated positive if any sign of Typus melancholicus could be found, whereas another estimated the degree of Typus melancholicus features vs neurotic features and decided according to which was more prominent; their agreement was a moderate kappa of 0.54 (Mundt et al. 1997). Von Zerssen's (1969) attempt to develop a psychometrically sound measure of Typus melancholicus is therefore to be highly commended as an attempt to establish the common language in this confused field and to give the clue for systematic research.

Unfortunately, the relationships between the clinically interesting typology and the established measures of personality have not been well investigated. The typological characterization of premorbid personality has been advanced in German-speaking countries, whereas test-psychological description has been popular in English-speaking countries (Möller and von Zerssen 1987). Two studies, however, report such attempts, comparing the Typus melancholicus score assessed by the clinician using the Biographical Personality Interview (von Zerssen et al. 1994) with self-reported personality traits according to the Munich Personality Test (von Zerssen et al. 1988). In a sample consisting of affective disorder patients and healthy controls, Hecht et al. (1997) found that Typus melancholicus score correlated negatively with Extraversion ($r = -0.47$; $P \leq 0.05$) and Frustration tolerance (-0.32 ; $P \leq 0.05$) but not with Rigidity ($r = 0.13$; $P > 0.05$), Neuroticism ($r = 0.00$; $P > 0.05$) or Esoteric tendencies ($r = -0.11$; $P > 0.05$). Among psychiatric patients, von Zerssen (1996) reported that the former correlated negatively with Extraversion ($r = -0.30$; $P < 0.01$) and positively with Rigidity ($r = 0.31$; $P < 0.01$).

In this paper we examine Typus melancholicus from the viewpoint of the five-factor model of personality structure which has found increasingly wider acceptance internationally in recent years. The so-called Big Five factors refer to neuroticism, extraversion, openness to experience, agreeableness and conscientiousness. The past decade has in fact witnessed a rapid convergence of views regarding the structure of personality traits, because these five factors have repeatedly been found to account for a large amount of variance in the data, irrespective of sampling procedures, instruments used, modes of rating (self-rating or relatives rating), and techniques of factor analysis (Costa and McCrae 1992b; Digman 1990). Von Zerssen (1993) once predicted that Typus melancholicus may be mainly characterized by a high degree of conscientiousness, probably in combination with a high degree of agreeableness, a somewhat increased degree of neuroticism, and a relatively low degree of openness to experience. In the same table where he reported correlations between the Biographical Personality Interview and the Munich Personality Test, von Zerssen provided two correlations between the former and the Six Factor Test, a newly developed questionnaire to assess personality dimensions including the Big Five factors; namely, Typus melancholicus score correlated -0.34 ($P < 0.01$) with Aggressiveness and 0.30 ($P < 0.01$) with Conscientiousness (von Zerssen

1996). Full details of these findings are yet to be reported. The present report therefore provides the first full account of the empirical investigation into the relationship between Typus melancholicus and the five-factor model of personality.

Subjects and methods

The subjects were 140 consecutive first-visit patients to the Nagoya City University Hospital Department of Psychiatry, who were aged 18 years or above and were accompanied by a close relative or a friend. The informant was then asked to complete a battery of three personality inventories concerning the patient's "usual self while disregarding how he/she was in periods of bad health." All the subjects were then given ICD-10 (World Health Organization 1993) diagnoses by experienced psychiatrists who performed non-structured clinical interviews and examinations, and remained blind to the results of the personality questionnaires.

Measures

Von Zerssen's Typus melancholicus scale (ZTM)

The ZTM consists of 66 items of von Zerssen's F-list measuring Tellenbach's Typus melancholicus. The F-list originally consisted of 104 items, 66 of which measured TM and 53 measured Kretschmer's cyclothymic temperament. The content validity of the two subscales of the F-list was established originally by several experts in Germany, including Tellenbach himself and Kretschmer's disciples (von Zerssen 1969; von Zerssen et al. 1970). The items are rated on a four-point scale ("Completely true," "Mostly true," "Somewhat true," and "Not true" are given 3, 2, 1, and 0 points, respectively), with 34 reversed items and 8 items given twofold weighting to reflect their importance in delineating Typus melancholicus. The possible score range, therefore, was between 0 and 222. The original German version was translated into Japanese by Sato and his colleagues; its semantic equivalence with the original version was ascertained by means of back-translation (Sato et al. 1992b). The F-list has been used in several studies in Germany (Czernick et al. 1996; Frey 1977; Matussek and Feil 1980; Matussek and Wolfgang 1983; von Zerssen 1969; von Zerssen et al. 1970), Denmark (Bech et al. 1980), Japan (Nakanishi and Isobe 1993; Sakado et al. 1992; Sato et al. 1992a; Sato et al. 1995; Sato et al. 1992b; Sato et al. 1993; Sato et al. 1994b), and Chile (Dörr Alamos and Viani Barbagelata 1991). In the present study the wordings of the instructions and the test items were modified to be suitable for relatives' rating.

Kasahara's Typus melancholicus scale (KTM)

Kasahara in Japan developed a 15-item checklist to measure Tellenbach's Typus melancholicus, independently of von Zerssen's F-list (Kasahara 1984). Each item is rated on a four-point scale (3, 2, 1, 0) and there is no reversed item. The score can range between 0 and 45. It has been used in several studies either alone (Ogawa and Suzuki 1987; Sato et al. 1993; Sato et al. 1994a; Sato and Tanaka 1991a; Sato and Tanaka 1991b) or in combination with von Zerssen's F-list (Nakanishi and Isobe 1993; Sato et al. 1992a; Sato et al. 1995; Sato et al. 1992b; Sato et al. 1994b). In this study the original KTM was slightly modified to be suitable for relatives rating.

NEO Five Factor Inventory (NEO-FFI), Form R (relatives' rating)

The NEO-FFI is a concise measure of the five major domains of personality according to the five-factor model. It consists of 60 items selected from the 240 of its parent inventory, the Revised

Table 1 Diagnoses of the subjects according to ICD-10

Diagnostic categories according to ICD-10	N
Organic, including symptomatic, mental disorders (F00-09)	29 (20.7)
Mental and behavioural disorders due to psychoactive substance use (F10-19)	3 (2.1)
Schizophrenia, schizotypal, and delusional disorders (F20-29)	19 (13.6)
Mood disorders (F30-39)	48 (34.3)
Neurotic, stress-related, and somatoform disorders (F40-49)	22 (15.7)
Behavioural syndromes associated with physiological disturbances and physical factors (F50-59)	6 (4.3)
Disorders of adult personality and behaviour (F60-69)	5 (3.6)
Mental retardation (70-79)	5 (3.6)
Behavioural and emotional disorders with onset usually occurring in childhood and adolescence (F90-98)	3 (2.1)

NOTE: Numbers in parentheses are percentages

NEO Personality Inventory (NEO PI-R; Costa and McCrae 1992a). Each item is answered on a five-point Likert scale ("Strongly disagree," "Disagree," "Neutral," "Agree," "Strongly agree"); 12 items each are prepared for the five dimensions of Neuroticism (N); Extraversion (E), Openness (O), Agreeableness (A), and Conscientiousness (C), so that each dimension is given a score between 0 and 48. There are two versions of the NEO PI-R: Form S for self-reports and Form R for relatives' ratings. The Form R of the NEO-FFI corresponds to that of the NEO PI-R. The NEO PI-R has been standardized in Japan by Shimonaka (1996).

Results

The mean age of our 140 subjects was 49.1 years ($SD = 20.6$ years). There were 74 females (53%). The informants were the patient's spouses (44%), parents (32%), son/daughter (10%), siblings (5%), other family members (8%), and friends (1%). Table 1 shows the diagnostic composition of our patient group according to ICD-10 diagnostic criteria. Not only the unipolar depressive patients, whose premorbid personality the clinical concept of Typus melancholicus is claimed to depict, but also the patients with all the other diagnoses are the subjects of the following analyses, because we wanted to allow for larger variances in ZTM or KTM scores and include both high and low scorers in our analyses in order to sensitively analyze the relationships between Typus melancholicus and the five-factor model of personality.

The concurrent validity of the two scales for Typus melancholicus was examined by calculating Pearson product moment correlation between ZTM and KTM. It was 0.69 ($P < 0.001$), a value attesting to strong concurrent validity between the two scales.

In order to examine the internal consistency reliability, Cronbach's alpha coefficients were calculated for ZTM, KTM, and the five subscales of NEO-FFI (Table 2). They were all above 0.70 and were hence considered adequate (Nunnally 1978).

The Pearson correlation coefficients between ZTM, KTM, and the five factors of NEO-FFI are shown in Table 3. Both ZTM and KTM showed consistent moderately strong correlations with Conscientiousness, Agreeableness, and, to a lesser degree, Extraversion. It was also noted that some of the personality scales of the NEO-FFI showed statistically significant correlations among themselves which were greater than in general population

Table 2 Cronbach's alpha coefficients for subscales

Scales	Cronbach's alpha
ZTM	0.74
KTM	0.84
NEO-FFI	
N	0.78
E	0.81
O	0.70
A	0.85
C	0.87

Table 3 Pearson correlations between ZTM, KTM, and NEO-FFI

	N	E	O	A	C
ZTM	0.07	0.30***	0.15	0.57***	0.59***
KTM	-0.01	0.30***	0.06	0.42***	0.59***
NEO-FFI					
N		-0.35***	-0.13	-0.37***	-0.34***
E			0.34***	0.36***	0.47***
O				0.27**	0.26**
A					0.54***

** $P < 0.01$

*** $P < 0.001$

(Costa and McCrae 1992a). This may be due to the restricted nature of our population, all of whom were psychiatric patients. For example, some of the correlations between subscales of the Munich Personality Test, when administered to a psychiatric population, were also reported to be higher than when administered to general population and were substantial in the range of 0.40 to 0.58 (von Zerssen et al. 1988).

Discussion

A brief discussion is in order first regarding our decision to assess the premorbid personality traits of psychiatric patients by asking their close relatives to complete the questionnaires while disregarding the patients' illness. The possible influence of clinical state on personality assessment has been well documented (Coppin and Met-

calfe 1965; Kerr et al. 1970). The retrospective assessment of premorbid personality by explicitly instructing the patient to disregard the illness has been shown to minimize the distorting effects of the mental state in one study (Kendell and DiScipio 1968) but not in others (Hirschfeld et al. 1983; Liebowitz et al. 1979). Both self-reports and observer (investigators' and relatives') ratings are venerable traditions in personality assessment, and both have partisans. Several studies have reported moderate correlations in the range between 0.34 and 0.67 between self-ratings and observer ratings of personality traits (Costa and McCrae 1992b; von Zerssen et al. 1988). Although self-reports are the most widely used source of personality data, observer ratings may be preferable to self-reports for many applications, such as when the individual is physically or mentally incapable of completing the inventory or when there is reason to suspect that he/she will give some biased responses. In particular, it is believed that the investigators' or relatives' ratings can minimize the effect of axis-I symptomatology on personality assessments. We therefore chose to rely on the relatives' ratings. We also did not impose strict restrictions on the kinds of informants. Whether different informants have systematic bias in the assessment of the patient's personality is not settled. It is hoped, therefore, that data from retrospective observer ratings be complemented in the future by methodologically more rigorous prospective studies such as the ones by Angst and colleagues (Angst and Clayton 1986; Clayton et al. 1994) and by the NIMH Collaborative Program on the Psychobiology of Depression (Hirschfeld et al. 1989). Unfortunately, to date no prospective study exists that measures Typus melancholicus in relationship to depression (Sato and Nishioka 1996).

The first main finding of our study is that the two rating scales of Typus melancholicus, ZTM and KTM, had adequate internal consistency reliability and correlated strongly with each other, suggesting that they both tap a common trait. Elsewhere a series of studies found a correlation of 0.53 ($n = 94$, $P < 0.01$) in mixed depressed and non-depressed subjects (Sato et al. 1992a) and 0.45 ($n = 628$, $P < 0.001$) in a general population sample (Sakado et al. 1992) between these two scales.

The second major finding of our study is that Typus melancholicus, measured either by ZTM or KTM, was characterized by high Conscientiousness, high Agreeableness, and, to a lesser extent, high Extraversion. The high correlations between Typus melancholicus score and Conscientiousness and Agreeableness scales of the Big Five can be said to be in accordance with the original description of Typus melancholicus as love for orderlines and devotion to significant others. They also bore out von Zerssen's main predictions regarding Typus melancholicus and the Big Five factors. The relationship between Typus melancholicus and conscientiousness has been supported by two of the three studies to date relating Typus melancholicus to the Munich Personality Test or the Six Factor Test (von Zerssen 1996), but not the other (Hecht et al. 1997). With regard to agreeableness, because Aggressiveness of the Six Factor Test is interpreted as corre-

sponding to the inverse of agreeableness (von Zerssen 1994), the one study reporting negative correlation between aggressiveness and Typus melancholicus can be said to be in accordance with our present findings (von Zerssen 1996).

The high correlation between ZTM or KTM with Extraversion, observed in our data, is harder to explain because this appears to be inconsistent with the concept of Typus melancholicus and because two previous studies have found negative correlation between Typus melancholicus scale of the Biographical Personality Interview and the extraversion scale of the Munich Personality Test (Hecht et al. 1997; von Zerssen 1996). The one study employing the Six Factor Test could not find a significant relationship between Typus melancholicus and extraversion (von Zerssen 1996). Whether these discrepancies are due to the measures we used, the methodology we employed, or the population we studied cannot be readily answered.

Matussek and associates (Matussek and Feil 1980; Matussek and Wolfgang 1983) administered von Zerssen's F-list to 217 subjects along with several self-report personality inventories. They obtained four subscales for von Zerssen's F-list, which loaded on separate super factors when all the personality inventory scales were subjected to factor analysis. The four subscales of F-list 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." Although these subscales are hard to relate directly to the five basic dimensions of personality, Matussek et al.'s findings indicate that von Zerssen's F-list consists of heterogeneous personality traits.

These considerations lead us to the conclusion that Typus melancholicus, as measured either by von Zerssen's F-list or by Kasahara's questionnaire, is not a personality trait but a personality traits constellation. The validity of agglomerating several of the Big Five factors of personality into one scale may be subject to theoretical criticism, on the one hand, and must await empirical validation, on the other.

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