

# Use of the temperament and character inventory personality questionnaire in dysthymic disorder

Mircea Alexandru BIRT<sup>a</sup>, MD, PhD, Aura VAIDA<sup>b</sup>, MD, PhD,  
Dan PRELIPCEANU<sup>c</sup>, MD, PhD,

<sup>a</sup>University "Babes-Bolyai" Cluj-Napoca, Romania, Faculty of Psychology and Education Sciences; Head of Department, Adult Clinical Hospital, Department of Psychiatry-Ergotherapy, Romania; <sup>b</sup>Adult Clinical Hospital, Department of Psychiatry-Ergotherapy, Cluj-Napoca, Romania; <sup>c</sup>University of Medicine and Pharmacy "Carol Davila", Head of Department of Psychiatry, "Al. Obregia" Hospital, Bucharest, Romania

## ABSTRACT

**Objective:** This paper aims to evidence some possible temperament and character constellations in dysthymic disorders by using Cloninger's temperament and character inventory (TCI) personality questionnaire, 1994.

**Material and methods:** The study included 41 patients with dysthymic disorder (DD) diagnosis according to DSM-IV-TR criteria. The results of patient assessment by means of Cloninger's TCI were compared with those of controls, and patients with recurrent depressive disorder (RDD) and bipolar affective disorder (BD).

**Results:** Statistical analysis of TCI data (descriptive and inferential analysis) reveals significant differences in dysthymic patients who scored higher than controls in Harm Avoidance (HA) and Self-Transcendence (ST), and lower in Persistence (P). Also, significant results were obtained in subscales NS1, RD4, C1, C2 where dysthymic patients scored lower than controls and in C4 where they scored higher. Patients with dysthymia compared with patients with unipolar affective disorders are more asthenic, struggle to find direction, purpose, and meaning in their lives. Compared to patients with bipolar disorder, dysthymic patients present difficulties in tolerating uncertainty or unfamiliar circumstances that are potentially dangerous, they often feel tense and anxious; they are more empathic and preoccupied with their own feelings. The profile types of personality provided by configural analysis are: flexible (51.2%), avoidant (19.51%), passive-aggressive (9.75%), antisocial (4.87%), histrionic (4.87%), explosive (2.43%) and passive-dependent (7.31%).

**Conclusions:** The personality constellation of dysthymic patients is characterized by being: cautious, fearful, tense, apprehensive, timid, discouraged, negativistic or pessimistic even in situation that do not worry other people. Their energy level tends to be low, and they feel chronically tired or easily fatigued. Compared with unipolar and bipolar patients, dysthymic patients present some differences in the dynamics of temperament, their behavior tend to be more unstable (lower NS and RD scores). The diversity of personality profiles identified in dysthymic patients confirms the heterogeneity of the concept of dysthymia.

**Key-words:** Temperament and Character Inventory (TCI) questionnaire; personality assessment; dysthymic disorder

## INTRODUCTION

The interferences between affective disorders and personality are numerous in the psychopathological and therapeutic fields (1,2,3,4,5,6). The nosological and clinical concept of affective disorder still determines disputed discussions (7). Although the clinical heterogeneity of dysthymia is widely accepted, the underlying personality profile of this was less studied compared with unipolar and bipolar affective disorders (8,9).

The knowledge of dysthymic patient personality profiles represents not only an important psychopathological and therapeutic target, but also a prognostic factor.

TCI is a self-evaluation questionnaire by which subjects are asked to answer by “true” or “false” to 240 statements depending on their own interests, emotional reactions, attitudes, aims and values. The analysis of the questionnaire allows the calculation of the main scores corresponding to the 4 temperament dimensions and the 3 character dimensions, as well as of 25 subscores corresponding to the 3 to 5 subscales of each main dimension: novelty seeking (NS), harm avoidance (HA), reward dependence (RD), persistence (P), self-directedness (S), cooperativeness (C) and self-transcendence (ST) (10,11). □

## MATERIAL AND METHODS

The TCI personality questionnaire was applied to 41 patients with dysthymia (DD), according to DSM-IV-TR criteria admitted to the department of Psychiatry-Ergotherapy of the Adult Clinical Hospital Cluj-Napoca. Mean age  $M_a=41.65$  year (11.49), age range 21–62 years. Females=29 subjects (70.73%); males =12 subjects (29.27%). Distribution by education: 4 grades=1 (2.44%); 7 grades=1 (2.44%); 8 grade=4 (9.76%); 10 grades=1 (2.44%); high school=17(41.46%); post-high school=3 (7.32%); vocational school=4 (9.76%); higher education=10 (24.39%).

The results obtained by the evaluation of dysthymic patients using Cloninger’s TCI personality questionnaire (1994) were compared with those

obtained by 27 subjects with recurrent depressive disorders (RDD), 19 subjects with bipolar affective disorder (BD), and 350 subjects from the general population (controls). The data were statistically processed by the calculation of means, percentage and standard deviations (descriptive analysis) for all dimensions depending on the diagnostic type. In order to identify the differences in some aspects between patients with recurrent depressive disorder, bipolar disorder, dysthymic disorder and controls, inferential analysis was performed using the Student “t” test. □

## RESULTS AND DISCUSSIONS

The descriptive analysis (means, standard deviation) for the 4 groups of subjects is presented in Table 1.

Dimensions	RDD N = 27		BD (N = 19)		DD (N = 40)		CONTROL (N = 350)	
	M	AS	M	AS	M	AS	M	AS
NS1	5.18	1.75	5.84	2.69	5.73	2.19	6.47	1.87
NS2	4.77	1.69	5.15	2.16	4.41	2.13	4.47	2.30
NS3	4.14	2.12	4.57	3.11	5.26	2.41	5.02	2.43
NS4	3.25	1.65	3.68	2.21	3.92	1.57	4.36	1.92
<b>NS</b>	<b>17.37</b>	<b>4.84</b>	<b>19.26</b>	<b>7.02</b>	<b>19.31</b>	<b>5.11</b>	<b>20.31</b>	<b>5.80</b>
HA1	7.37	2.43	5.68	2.92	6.68	2.62	4.72	2.58
HA2	5.70	1.20	4.31	1.97	5.21	1.73	3.66	1.90
HA3	4.77	2.06	4.00	2.10	4.51	2.38	3.61	2.27
HA4	6.70	2.12	4.94	2.63	5.58	2.59	3.20	2.21

<b>HA</b>	<b>24.55</b>	<b>6.01</b>	<b>18.94</b>	<b>8.10</b>	<b>22.00</b>	<b>7.35</b>	<b>15.20</b>	<b>6.67</b>
RD1	7.11	1.57	7.52	1.61	7.60	1.48	6.66	1.97
RD3	4.33	1.81	5.00	1.63	4.73	1.93	5.09	1.97
RD4	2.77	1.71	2.52	1.30	2.56	1.53	3.14	1.47
<b>RD</b>	<b>14.22</b>	<b>3.26</b>	<b>15.05</b>	<b>3.15</b>	<b>14.90</b>	<b>3.12</b>	<b>14.90</b>	<b>3.77</b>
<b>P</b>	<b>4.37</b>	<b>1.18</b>	<b>4.68</b>	<b>1.76</b>	<b>3.90</b>	<b>1.47</b>	<b>4.44</b>	<b>1.81</b>
S1	3.44	1.80	4.26	1.93	3.51	2.15	5.01	1.92
S2	3.88	1.97	4.52	1.71	4.85	1.63	5.04	1.78
S3	1.74	1.05	2.21	1.51	1.97	1.29	3.62	3.08
S4	5.40	2.00	6.05	2.22	5.85	2.49	5.01	2.93
S5	6.48	1.67	7.21	1.98	7.00	2.07	7.98	2.57
<b>S</b>	<b>20.96</b>	<b>4.75</b>	<b>24.26</b>	<b>6.44</b>	<b>23.21</b>	<b>6.45</b>	<b>26.74</b>	<b>7.88</b>
C1	5.25	1.76	5.68	1.49	5.29	1.86	6.07	1.75
C2	4.07	1.49	3.63	1.57	4.39	1.48	4.88	1.49
C3	5.03	0.75	5.26	1.32	5.19	0.98	5.26	1.37
C4	7.11	2.20	7.15	2.06	7.39	1.92	6.54	2.53
C5	6.07	1.51	6.47	1.74	6.28	1.67	6.04	1.82
<b>C</b>	<b>27.48</b>	<b>4.66</b>	<b>27.68</b>	<b>6.24</b>	<b>28.63</b>	<b>4.68</b>	<b>28.78</b>	<b>6.40</b>
ST1	6.55	2.20	7.47	2.16	6.60	2.03	5.78	2.29
ST2	5.29	1.87	6.00	2.23	5.02	2.15	3.87	2.04
ST3	7.40	2.29	7.10	3.10	6.90	2.90	7.13	3.03
<b>ST</b>	<b>19.25</b>	<b>4.17</b>	<b>20.57</b>	<b>6.37</b>	<b>18.53</b>	<b>5.06</b>	<b>16.78</b>	<b>5.86</b>

**TABLE 1.** Descriptive analysis (means, standard deviations) for patients with dysthymic disorder (DD), recurrent depressive disorder (RDD), bipolar affective disorder (BD) and the general population (controls).

Where:

NS –Novelty Seeking; NS1- Exploratory Excitability vs Stoic Rigidity; NS2 – Impulsiveness vs Reflection; NS3 – Extravagance vs Reserve; NS4 – Disorderliness vs Regimentation

HA – Harm Avoidance; HA1 – Anticipatory Worry and Pessimism vs Uninhibited Optimism; HA2 – Fear of Uncertainty; HA3 – Shyness with Strangers; HA4 – Fatigability vs Vigor

RD – Reward Dependence; RD1 – Sentimentality; RD3 – Attachment vs Detachment; RD4 – Dependence vs Independence  
P – Persistence

S –Self-Directedness; S1 – Responsibility vs Blaming; S2 – Purposefulness vs Lack of Goal Direction; S3 – Resourcefulness vs Inertia, S4 – Self-Acceptance vs Self-Striving; S5 – Congruent Second Nature vs Bad Habits  
C – Cooperativeness; C1 – Social Acceptance vs Social Intolerance; C2 – Empathy vs Social Disinterest; C3 – Helpfulness vs Unhelpfulness; C4 – Compassion vs Revengefulness; C5 – Integrated Conscience vs Self-Serving Advantage

ST – Self-Transcendence; ST1 – Creative Self-Forgetfulness vs Self-Consciousness; ST2 – Transpersonal Identification; ST3 – Spiritual Acceptance vs Rational Materialism

Compared with general population, dysthymic patients obtain higher scores for dimensions HA, ST and lower scores for S and P. Also, for subscales NS, RD4, C1 and C2, dysthymic patients have lower scores than controls and higher scores for RD1, S4 and C4.

Inferential analysis, presented in Table 2, reveals significant differences between patients with dysthymia and the general population (controls) in the following dimensions and subscales: NS1(-); HA (HA1, HA2, HA3, HA4) (+ higher scores compared with controls); RD1(+), RD4(-), P(-), S1(-), S3(-), S4(+), S5(-), S(-), C1(-), C2(-), C4(+), ST1(+), ST2(+), ST(+).

Between patients with dysthymia and RDD, significant differences appear in HA4 (- lower scores compared with RDD) and S2 (+); and compared with BD, differences are observed in subscales HA2 (+ higher scores than BD) and C2 (+).

DIMENSIONS	„t” DD /controls	„t” DD /RDD	„t” DD /BD
NS1	<b>2.08**</b>	1.13 ns	0.15 ns
NS2	0.09 ns	0.77 ns	1.24 ns
NS3	0.59 ns	2.01 ns	0.85 ns
NS4	1.62 ns	1.66 ns	0.43 ns
NS	1.16 ns	1.58 ns	0.02 ns
HA1	<b>4.54**</b>	1.10 ns	1.27 ns
HA2	<b>5.34**</b>	1.35 ns	<b>1.71*</b>
HA3	<b>2.28**</b>	0.48 ns	0.83 ns
HA4	<b>5.64**</b>	<b>1.94*</b>	0.87 ns
HA	<b>5.65**</b>	1.55 ns	1.39 ns
RD1	<b>3.70**</b>	1.30 ns	0.19 ns
RD3	1.13 ns	0.86 ns	0.55 ns
RD4	<b>2.32**</b>	0.53 ns	0.09 ns
RD	0.01 ns	0.85 ns	0.17 ns
P	<b>2.14**</b>	1.44 ns	1.67 ns
S1	<b>4.27**</b>	0.14 ns	1.34 ns
S2	0.71 ns	<b>2.09**</b>	0.69 ns
S3	<b>6.31**</b>	0.81 ns	0.58 ns

S4	<b>1.99*</b>	0.62 ns	0.30 ns
S5	<b>2.80**</b>	1.13 ns	0.37 ns
S	<b>3.23**</b>	1.65 ns	0.58 ns
C1	<b>2.56**</b>	0.07 ns	0.87 ns
C2	<b>2.02**</b>	0.85 ns	<b>1.77*</b>
C3	0.39 ns	0.74 ns	0.19 ns
C4	<b>2.58**</b>	0.53 ns	0.41 ns
C5	0.90 ns	0.55 ns	0.37 ns
C	0.19 ns	0.99 ns	0.59 ns
ST1	<b>2.43**</b>	0.10 ns	1.46 ns
ST2	<b>3.24**</b>	0.55 ns	1.59 ns
ST3	0.47 ns	0.79 ns	0.24 ns
ST	<b>2.05**</b>	0.64 ns	1.22 ns

**TABLE 2.** Inferential analysis (Student “t” test)

ns – not significant  
 \* – significant at p < 0.05  
 \*\* – significant at p < 0.01

Dysthymia			
Dimensions	High score	Average score	Low score
NS	28.82%	<b>46.34%</b>	26.8%
HA	<b>73.17%</b>	17.07%	9.75%
RD	21.9%	<b>48.78%</b>	29.26%
P	4.87%	26.52%	<b>68.29%</b>
S	4.87%	14.63%	<b>80.48%</b>
C	2.43%	43.9%	<b>53.65%</b>
ST	21.95%	<b>41.46%</b>	36.58%

**TABLE 3.** Score percentage of temperament and character dimensions in patients with dysthymic disorder (DD).

DD RDD BD									
	high	average	low	high	average	low	high	average	low
NS	28.82%	<b>46.34%</b>	26.8%	14.81%	40.74%	<b>44.44%</b>	<b>36.84%</b>	31.57%	31.57%
HA	<b>73.17%</b>	17.07%	9.75%	<b>88.88%</b>	11.11%	0%	<b>73.68%</b>	15.78%	10.52%
RD	21.9%	<b>48.78%</b>	29.26%	14.81%	40.74%	<b>44.44%</b>	21.05%	<b>52.63%</b>	26.31%
P	4.87%	26.52%	<b>68.29%</b>	3.70%	40.74%	<b>55.55%</b>	10.52%	<b>52.63%</b>	36.84%
S	4.87%	14.63%	<b>80.48%</b>	0%	11.11%	<b>88.88%</b>	0%	36.84%	<b>63.15%</b>
C	2.43%	43.9%	<b>53.65%</b>	0%	37.03%	<b>62.96%</b>	5.26%	36.84%	<b>57.89%</b>
ST	21.95%	<b>41.46%</b>	36.58%	22.22%	<b>51.85%</b>	25.92%	<b>36.84%</b>	<b>36.84%</b>	26.31%

**TABLE 4.** Score percentage of temperament and character dimensions in patients with dysthymic disorder (DD), recurrent depressive disorder (RDD) and bipolar affective disorder (BD)

- *Low S scores:* individuals are described as immature, weak, fragile, self-blaming, purposeless, with low self-esteem, incongruent goals, destructive, ineffective, irresponsible, unreliable, and poorly integrated when they are not conforming to the direction of a mature leader. Their behavior is dominated by reactions to stimulation and pressure from external circumstances, rather than personal goals and values.
- *Low C scores:* self-absorbed, intolerant, critical, helpless, revengeful, opportunistic, and detached. These individuals primarily look out for themselves. Low (C) scores are characteristic of many people who prefer to be solitary, but are handicapped in social relations among peers.
- *Average ST scores –* the character traits are flexible, inconsistent under varying circumstances.

The score percentage of temperament and character dimensions in patients with dysthymic disorder is presented in Table 3.

Individuals who are high or low on a dimension are definitely typical in their pattern of behavior regardless of circumstances, whereas those who are near to average are inconsistent and often atypical under varying circumstances.

The detailed description of temperament and character dimensions in patients with dysthymic disorder is presented below:

- *Average NS scores:* the temperament traits are flexible, inconsistent under varying circumstances
- *High HA scores:* patients tend to be cautious, careful, fearful, tense, apprehensive, nervous, timid, doubtful, discouraged, insecure, passive, negativistic or pessimistic in situations that do not worry other people. Their energy level tends to be low, and they feel chronically tired or easily fatigued.
- *Average RD scores:* the temperament traits are flexible, inconsistent under varying circumstances
- *Low P scores:* pragmatists who readily accept the value of compromise; they manifest a low level of perseverance and repetitive behavior even in response to intermittent reward

Below is presented the score percentage temperament and character dimensions in patients with dysthymic disorder (DD), recurrent depressive disorder (RDD) and bipolar affective disorder (BD) (Table 4).

The personality constellation of dysthymic patients is characterized by being: cautious, careful, fearful, tense, apprehensive, nervous, timid, discouraged, insecure, passive, negativistic or pessimistic even in situation that do not worry other people. Their energy level tends to be low, and they feel chronically tired or easily fatigued.

Compared with the temperament and character of unipolar (RDD) and bipolar (BD) patients, the dysthymic's present some clinical differences. Thus, we observe that in the structure of temperament all the 3 groups of patients have higher scores for dimension HA (harm avoidance), which reveals the presence of some common temperamental characteristics for all 3 diagnostic classes (anxiety, tension, uncertainty, indecision, worry, pessimism, low energy level). Concerning the NS dimension, dysthymic patients present average scores that show some instability of this dimension, and in the case of patients with RDD, the scores are lower (temperate, indifferent, unenthusiastic, stoic, detached, reserved, systematic, tolerant of monotony).

Regarding the NS dimension, patients with BD present high scores, and they are described as more excitable, curious, explorative, exuberant, easily bored, impulsive, and disorderly. For the RD dimension, patients with dysthymic disorder and RDD obtain average scores, which denote some flexibility of this dimension. Patients with RDD show low scores, and they are described as being practical, detached, independent and socially insensitive.

There are no differences between the 3 diagnostic classes in character dimensions NS and C, the patients obtaining low scores (immature, vulnerable, with low self-esteem, inefficient, irresponsible, egocentric, intolerant, critical, helpless, and detached). Also, we observe some common elements for the ST dimension (average scores in all 3 diagnostic classes), but patients with BD also present high scores (unpretentious, patient, creative, absent-minded, spiritual).

The personality profile type of patients with dysthymic disorder by configural analysis of TCI

data is: flexible (51.2%), obsessional (19.51%), passive-aggressive (9.75%), antisocial (4.87%), histrionic (4.87%), explosive (2.43%) and passive-dependent (7.31%) (Table 5).

Personality profile types	Dysthymia
Flexible	51.20%
Obsessional	19.51%
Passive-aggressive	9.75%
Antisocial	4.87%
Histrionic	4.87%
Explosive	2.43%
Passive-dependent	7.31%

**TABLE 5.** Personality profile types according to TCI data in patients with dysthymic disorder

The dysthymic personality profile according to TCI is very diverse. The high score percentage found in the flexible profile (51.2%) denotes an instability of temperament and character traits.

The obsessional profile (19.51%) confirms the nosological heterogeneity of dysthymic patients. Its correlation with Akiskal's depressive temperament and K. Schneider depressive personality reveals the existence of subaffective disorder. (12,13)

The presence of passive-aggressive (9.75%), passive-dependent (7.31%), antisocial (4.87%) and histrionic (4.87%) profile types, although statistically insignificant, reveals not just intrinsic personality traits, but also disadaptive desynchronization, chronicization of the disorder and therapeutic resistance.

The dysthymic personality profile type identified by the TCI questionnaire, partially overlaps with the depressive temperament described by Akiskal, K. Schneider's depressive personality, and von Zerssen's "typus melancholicus". □

## CONCLUSION

- The dominant temperament pattern of dysthymic patients obtained by TCI is characterized by the presence of average NS (Novelty Seeking) scores (46.34%) and RD (Reward Dependence) (48.78%) dimensions, and high scores for the HA (Harm Avoidance) dimension (46.34%).
- The character pattern of dysthymic patients shows the following dynamics: low scores

for S (Self-Directedness) (80.48%), and C (Cooperativeness) (53.65%) dimensions, and average scores for the ST (Self-Transcendence) dimension (41.46%).

- The personality constellation of dysthymic patients is characterized by being: cautious, careful, fearful, tense, apprehensive, nervous, timid, discouraged, insecure, passive, negativistic or pessimistic even in situations that do not worry other people. Their energy level tends to be low, and they feel chronically tired or easily fatigued.
- Compared with unipolar (RDD) and bipolar patients (BD), dysthymic patients present some differences in temperament dynamics; their behavior tends to be more unstable (lower NS – Novelty-Seeking and RD – Reward Dependence scores).
- The diversity of personality profiles identified in dysthymic patients confirms the heterogeneity of the concept dysthymia. □

## ACKNOWLEDGEMENTS

We address our thanks to psychologist Maria Botei who helps us in data collecting.

## REFERENCES

1. **Akiskal HS** – Mood disorders: Clinical features. Affective Temperament. În: Kaplan & Sadock's. *Comprehensive Text Book of Psychiatry*, 8<sup>th</sup> ed., Vol.I, ed. Philadelphia: Lippincott Williams & Wilkins; 2005; 1613
2. **Birt M** – Personalitatea și tulburările afective. In Birt M. *Psihiatrie – Prolegomene clinice*, ed. Cluj-Napoca: Dacia; 2001; 377-381
3. **Birt M, Vaida A** – Normative Data in The Romanian Population for The Temperament and Character Inventory (T.C.I.) Personality Questionnaire. *Revista Română de Psihiatrie*, 2004; VI (3-4):96-110
4. **Birt MA, Vaida A** – Use of the TCI personality questionnaire in bipolar affective disorders and recurrent depressive disorders. *Revista Română de Psihiatrie*, 2005; VII (1-2):15-22
5. **Calyton PJ, Ernst C, Angst J** – Premorbid personality traits of men who develop unipolar or bipolar disorders. *Eur Arch Psychiatry Clin Neurosci*, 2004; 243:340-6
6. **Joffe RT, et al** – The Tridimensional Personality Questionnaire in major depression. *American Journal of Psychiatry*, 1993; 150:959-960
7. **Hardy P** – Les dysthymies. *L'Encephale*. 1992; XVIII:707-715
8. **Hantouche EG, Akiskal HS** – Outils d'évaluation clinique des tempéraments affectifs. *L'Encephale*. 1997; 58:27-34
9. **Brown SL, Svarkic DM, Przybeck TR, Cloninger CR** – The Relationship of Personality to Mood and Anxiety States: A Dimensional Approach. *Journal of Psychiatric Research*. 1992; 26:197-211
10. **Cloninger CR, Przybeck TR, Svarkic DM, Wetzel RD** – TCI The Temperament and Character Inventory (TCI): A Guide to Its Development and Use, Center for Psychobiology of Personality. St. Louis, Missouri: Washington University, 1994
11. **Svarkic DM, Przybeck TR, Cloninger CR** – Mood states and personality traits. *J Affective Disord*. 1992; 24:217-26
12. **Akiskal HS, et al** – Switching from unipolar to bipolar II. An 11-year prospective study of clinical and temperamental predictors in 559 patients. *Arch Gen Psychiatry*, 1995; 52:114-23
13. **Chiaroni P, Hantouche E G, Gouvenet J, Azorin JM, Akiskal HS** – Etude des tempéraments dépressif et hyperthymique chez 165 sujets controles et a risque pour les troubles de l'humeur. *L'Encephale*. 2004; XXX (fasc. 6):509-516