Research report

Emotional and affective temperament in 23 professional areas

A. Schmidt a, R.S. Rodrigues a, C.C. Pipa a, L.N. Brandalise a, T.M. Lorenzi b, D.R. Lara a,b,*

a Departamento de Psiquiatria – PUCRS, Brazil
b Faculdade de Biociências, PUCRS, Av. Ipiranga, 6681 – Pd12A, 90619-900 Porto Alegre, RS, Brazil

Article info

Article history:
Received 23 November 2009
Received in revised form 8 February 2010
Accepted 23 March 2010

Keywords:
Temperaments
Professions
Mood
Personality

Abstract

Background: Preliminary data has shown temperament differences in workers of a few professions, particularly in artists.

Methods: 3805 subjects (75.5% female, mean 32.4±9.8 years) of 23 broad professional areas answered a web-survey with the Combined Emotional and Affective Temperament Scale (CEATS).

Results: Educational level was correlated with drive and control, was lower in depressives and apathetics and higher in euthymics and hyperthymics. Fear was lower in administration and communications and higher in computing and office workers. Drive was lower in those unemployed and at home and higher in fitness and administration. Control was lower in arts and higher in teaching and health caring. Anger was lower in subjects in the areas of teaching and health caring and higher in human studies and unemployed. For affective temperament scores: depressive was lower in fitness and higher in human studies; anxious and apathetic scores were lower in fitness and higher in unemployed subjects; cyclothymic was lower in health caring and higher in unemployed; euthymic score was lower in human studies and higher in fitness; irritable was lower in religion and higher in unemployed; labile was lower in engineering and higher in communications and arts; hyperthymic was lower in human studies and high in fitness.

Limitation: Convenience sample by the internet and most subjects assessed the instruments through a psychoeducational website for bipolar spectrum disorders, which may have biased the absolute scores of emotional temperaments.

Conclusions: Professional areas and educational level are associated with distinct emotional and affective profiles.

© 2010 Elsevier B.V. All rights reserved.

1. Introduction

Temperament relates to the emotional nature and the quality of the prevailing mood, being mostly inherited and relatively stable over time (Allport, 1961; Cloninger et al., 1993). Two of the most intensively studied temperament constructs in psychiatry are the model of affective temperaments by Akiskal et al. (2005), based on Kraepelin's fundamental states, and the psychobiological model by Cloninger et al. (1993) with a focus on behavior and basic emotions. We have recently proposed an integration of emotional and affective temperament constructs with clinical, neurobiological and treatment implications for psychiatric disorders (Lara et al., 2006; Lara and Akiskal, 2006). In this model, the emotional temperament operates as system with separate but interacting components of activation, inhibition and control, influencing mood, behavior, thoughts and personality. Mental activation is expressed by drive and pleasure (goal direction, excitement with novelty, high sense of pleasure, ambition and self-confidence), but if activation is
blocked or chaotic, it is expressed as anger (irritability, aggression, suspiciousness, impatience and resentfulness). Mental inhibition is expressed mainly as fear; i.e. being fearful, cautious, brooding, shy and predisposed to freezing in danger whereas disinhibition is expressed as being daring, risk-taking, impulsive, spontaneous and reactive in dangerous situations. Control mechanisms involve attention, concentration, responsibility, discipline, organization and ability to conclude tasks.

The affective temperament construct relates to the general prevailing mood or fundamental states as originally proposed by Kraepelin (1921). He described the manic (currently called hyperthymic), irritable, cyclothymic and depressive temperaments, which would predispose to mood disorders. More recently, Akiskal (1998) added the anxious temperament, which predisposes to anxiety disorders. We proposed a typological approach in which the affective temperament or prevailing mood is the overall result from the dynamic interaction of mental activation (drive and anger), inhibition (fear) and control. Thus, in order to account for other configurations not represented by the classical five affective temperaments, we put forward another five types: euthymic (balanced and stable), apathetic, labile and disinhibited (related to ADHD inattention, combined and hyperactive subtypes, respectively) and dysphoric (trend towards mixed mood). Specific emotional and affective temperament traits can be aggravated or attenuated by life events and different traits can be advantageous in some contexts and maladaptive in others.

The relationship between professions and temperament has been considered for a long time. Aristotle may have been the first to point out that melancholia was frequent in poets, artists, philosophers and statesmen (Jackson, 1986). The association of the cyclothymic temperament with musicians, writers, poets and creativity has also been repeatedly reported (Andreasen, 1987; Richards et al., 1988; Goodwin and Jamison, 2007). Akiskal et al. (2005) confirmed the role of cyclothymia in creative professions (arts and architecture), but pioneered the studies in other professions. They reported high hyperthymic attributes in industrialists and manager/executives; high dysthymic and obsessive–compulsive traits in lawyers and physicians; managers had high obsessive–compulsive traits, slightly higher hyperthymic traits and low cyclothymia; journalists had higher level of cyclothymic and hyperthymic and lower level of obsessive–compulsive traits; architects had higher cyclothymic temperaments and obsessive–compulsive traits; and artists had four times as many cyclothymic and were low on obsessive–compulsive traits.

We have recently developed and validated the Combined Emotional and Affective Temperament Scale (CEATS) to test our model. The results of the CEATS showed that each affective temperament was associated with a particular emotional profile of disinhibition–fear, drive, anger and control, as well as problems and benefits. The objective of the present study was to explore the association of 23 professional areas with emotional (fear, drive, anger and controls) and affective temperaments (hyperthymic, irritable, cyclothymic, apathetic, labile, anxious, depressive, euthymic, disinhibited and dysphoric) in a large sample evaluated in a web-based survey.

2. Methods

2.1. Participants and procedures

Our sample consisted of 3805 subjects (75.5% female) from 18 to 60 years old (mean 32.4 ± 9.8 years), of which 57% have received a psychiatric diagnosis. Educational level of participants was 2.8% primary school, 24.3% high school, 63.2% college, 7.5% master degree, and 2.3% Ph.D. degree.

Subjects accessed two different websites in Brazilian Portuguese: one was directed to the general population and was publicized in a local TV talk-show (15% of the sample) and the other was a psychoeducational website for bipolar spectrum disorders (http://www.bipolaridade.com.br). They informed their educational level choosing from 5 options (elementary school degree, high school degree, university degree, master’s degree and Ph.D.) and their profession in an open question before answering the CEATS internet version. This web strategy was chosen because all items are necessarily answered, no mistakes of data transfer are expected to occur, identification is only partial (e-mail address and names were required) and large samples are more easily achieved. Validation items were included to ensure attention and compromised participation. All participants gave their electronic informed consent before completing the scale. This form was elaborated to fulfill the requirements of the National Health Council of Brazil (Resolution 196/1996) and the Code of Ethics of the World Medical Association (Declaration of Helsinki). Their participation was voluntary and they could cancel their participation at any moment without justification. The study was approved by the Institutional Review Board of Hospital São Lucas from Pontifícia Universidade Católica do Rio Grande do Sul.

2.2. Measures

The CEATS is composed of an emotional and an affective section, as well as two questions to evaluate problems and benefits associated with temperament (Lara et al., 2008). It has 40 items in total, and typically takes 20–30 min to be completed.

2.3. Emotional section

The emotional section consists of 27 five-item multiple choice questions in the following order (number of items/dimension): fear (7), drive (8), control (6) and anger (6). The first and last alternatives have descriptions of low and high expression of the trait, respectively, except for fear items, which is the reverse. The total score of each dimension is the sum of scores from 1 to 5 for each question. In contrast to the original score of the CEATS, the score of disinhibition was reversed and named as fear.

2.4. Affective section

In the dimensional assessment of affective temperaments, short descriptions of the ten putative affective temperaments are presented with a 5-item Likert scale, from ‘nothing to do with me’ (rated as 1) to ‘everything to do with me’ (rated as
5). Another question asks to select which of these profiles is the most suitable to represent his/her affective temperament, allowing for its categorical evaluation.

2.5. Problems, benefits and adaptation score

Two final questions assess the degree of problems and benefits that one conceives to have with his/her temperament with a 4-point scale (no, minimal, moderate and marked problems or benefits, from 0 to 3). Problems and benefits are weakly correlated (\(R = -0.14\) in this sample).

2.6. Definition of professional areas

The informed professional areas were individually placed in the following arbitrary categories: administration (business, financial and commercial); arts (musicians, painters, and actors); biology; communications (journalists and publicists); computing (programmers and systems analysts); design (architects, designers, and stylists); engineering; esthetics (hairdressers, beautician, and make up staff); farming (farmers and agronomists); fitness (athletes and personal trainer); health caring (medical doctors, nurses, dentists, psychologists, and nutritionist); health technical (pharmacists, lab staff, and dental prosthesist); home (housewife), human studies (philosophers, history and language professionals); law; office (secretary, typist, and receptionists); out of work (unemployed, retired or on health care); religion (priests and theologists), repairments (technicians); security (police officers, military, and security guards); teaching (school teachers and pedagogues); tourism (agents and guides); >1 occupation. Categorization of all subjects was performed by consensus of three authors (AS, N1, N2). A higher frequency of women was observed in arts, teaching, health caring, and tourism. A higher frequency of males was found in engineering, computing, repairment and security (Chi-square, \(P<0.05\)).

2.7. Statistical analysis

Correlations between dimensional variables were performed with Pearson’s correlation test. Analysis of educational level for categorical affective temperaments was conducted with Kruskall–Wallis followed by one-way ANOVA and Tukey post hoc test for ranks. Emotional scores and affective temperament scores of professional categories are shown as mean and 95% confidence intervals. Frequency of subjects from different professional categories in categorical affective temperaments was analyzed with Chi-square test.

3. Results

3.1. Educational level

Educational level was correlated with drive and control (\(r = 0.12\) e \(r = 0.08\), \(p<0.001\), respectively). Anger and fear were weakly but negatively correlated with educational level (\(r = -0.04\) and \(r = -0.037\), \(p<0.02\), respectively). Accordingly, those with primary school level had lower drive than those with masters or Ph.D. degree (\(p<0.05\)) and lower control compared to those with Ph.D. degree (\(p<0.05\)). Anger and fear were not different among educational levels.

The correlations of educational level with dimensional scores of affective temperaments were significantly negative (\(p<0.01\)) for cyclothymics (\(r = -0.11\)), apathetics (\(r = -0.11\)), labiles (\(r = -0.10\)), dysphorics (\(r = -0.09\)), depressives (\(r = -0.09\)), anxious (\(r = -0.09\)), disinhibited (\(r = -0.04\)) and irritable (\(r = -0.03\); \(p<0.05\)) and positive for euthymics and hyperthymics (\(r = 0.06\) and \(r = 0.08\); \(p<0.01\)).

Comparing the educational level of categorical affective temperaments, euthymics had higher educational level than depressives, apathetics and labiles, disinhibited were more educated than depressives and apathetics, and hyperthymics had higher educational level than depressives (\(p<0.05\), Kruskall–Wallis followed by ANOVA of ranks).

Educational level was more associated with temperamental advantages (\(r = 0.12\) \(p<0.001\)) than with problems (\(r = -0.05\) \(p<0.01\)).

3.2. Professional areas

As shown in Fig. 1A, fear was lower in tourism, administration, arts, fitness, communications and in those with more than one occupation, and higher in computing and office workers. Drive was lower in those out of work, at home and office workers and higher in fitness, religion, arts, administration, communications and those with more than one occupation (Fig. 1B). Control was lower in arts, law and those out of work, and higher in teaching, health caring, office, engineering and administration (Fig. 1C). Anger was lower in subjects in the areas of health caring, repairments, religion, office, computing and teaching, and higher in human studies and those out of work (Fig. 1D).

As shown in Table 1, for affective temperament dimensions depressive scores were higher in human studies, farming and those out of work, and lower in fitness, tourism and religion. Anxious scores were higher in unemployed subjects and repairment workers and lower in fitness, health caring and administration. Cyclothymic scores were higher in unemployed, esthetics and arts, and lower in health caring, fitness and religion. Dysphorics scores were higher in esthetics, security and human studies, and lower in religion, health caring and fitness. Apathetic scores were higher in those out of work, in farming and biology, and lower in fitness, tourism and repairments. Euthymic scores were higher in religion, fitness and repairsments, and lower in human studies, arts and those out of work. Irritable scores were higher in esthetics, security and those out of work, and lower in religion, fitness and health careing. Labile scores were higher in those out of work, in esthetics and tourism, and lower in religion, fitness and health caring. Scores of disinhibited temperature were higher in arts, communications and those out of work, and lower in religion, engineering and office. Hyperthymic scores were higher in religion, fitness and tourism, and lower in those out of work, farming and human studies.

Distribution of categorical affective temperaments according to professional areas is shown in Table 2. As examples, among those who chose the depressive temperament, computing, office, those at home and out of work are
overrepresented, whereas among cyclothymics, religion and health are underrepresented.

4. Discussion

The present study showed that emotional and affective temperaments are associated with some differences in educational level and professions. These findings confirm and extend previous observations and studies, in particular that of Akiskal et al. (2005).

Regarding educational level, drive and control were weakly, but more associated with higher education than fear and anger. Interestingly, educational level seemed to be associated with “affective/emotional” advantages as much as with executive functions (related to control). This can also be seen by the lowest educational level in depressives and apathetics and higher

---

**Fig. 1.** Emotional temperament in professional areas. Mean and CI 95% of emotional temperament scores are shown in 23 professional areas. (A) fear; (B) drive, (C) control and (D) anger.
education in euthymics, hyperthymics and disinhibited, the latter having low control scores (Lara et al., 2008). In the original validation study of the CEATS, higher drive and control and lower anger, as well as euthymic and hyperthymic temperaments, were associated with fewer personal problems and more advantages. The present results showed that the most positive or healthy profiles were observed in subjects working on fitness, religion and health.

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Depressive</th>
<th>Anxious</th>
<th>Cyclothymic</th>
<th>Dysphoric</th>
<th>Apathetic</th>
<th>Euthymic</th>
<th>Irritable</th>
<th>Labile</th>
<th>Disinhibited</th>
<th>Hyperthymic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administration</td>
<td>704</td>
<td>2.86</td>
<td>2.78</td>
<td>3.64</td>
<td>3.63</td>
<td>2.43</td>
<td>2.63</td>
<td>3.72</td>
<td>2.94</td>
<td>3.11</td>
</tr>
<tr>
<td>Arts</td>
<td>97</td>
<td>3.00</td>
<td>2.95</td>
<td>3.95</td>
<td>3.68</td>
<td>2.71</td>
<td>2.34</td>
<td>3.52</td>
<td>3.18</td>
<td>3.40</td>
</tr>
<tr>
<td>Biology</td>
<td>49</td>
<td>2.92</td>
<td>2.84</td>
<td>3.61</td>
<td>3.71</td>
<td>2.64</td>
<td>2.57</td>
<td>3.73</td>
<td>3.22</td>
<td>3.71</td>
</tr>
<tr>
<td>Communications</td>
<td>200</td>
<td>2.64</td>
<td>2.90</td>
<td>3.84</td>
<td>3.77</td>
<td>2.62</td>
<td>2.47</td>
<td>3.77</td>
<td>3.16</td>
<td>3.35</td>
</tr>
<tr>
<td>Computing</td>
<td>125</td>
<td>3.18</td>
<td>3.06</td>
<td>3.53</td>
<td>3.62</td>
<td>2.82</td>
<td>2.66</td>
<td>3.47</td>
<td>2.96</td>
<td>3.08</td>
</tr>
<tr>
<td>Design</td>
<td>126</td>
<td>3.05</td>
<td>2.94</td>
<td>3.88</td>
<td>3.66</td>
<td>2.64</td>
<td>2.35</td>
<td>3.63</td>
<td>3.08</td>
<td>2.82</td>
</tr>
<tr>
<td>Engineering</td>
<td>113</td>
<td>3.09</td>
<td>3.03</td>
<td>3.50</td>
<td>3.64</td>
<td>2.81</td>
<td>2.62</td>
<td>3.66</td>
<td>2.90</td>
<td>2.81</td>
</tr>
<tr>
<td>Esthetics</td>
<td>26</td>
<td>2.69</td>
<td>3.08</td>
<td>4.00</td>
<td>4.04</td>
<td>2.81</td>
<td>2.73</td>
<td>4.15</td>
<td>3.50</td>
<td>3.00</td>
</tr>
<tr>
<td>Farming</td>
<td>44</td>
<td>3.36</td>
<td>3.07</td>
<td>3.66</td>
<td>4.75</td>
<td>2.95</td>
<td>2.36</td>
<td>3.55</td>
<td>3.16</td>
<td>2.34</td>
</tr>
<tr>
<td>Fitness</td>
<td>24</td>
<td>2.29</td>
<td>2.42</td>
<td>3.29</td>
<td>3.50</td>
<td>2.94</td>
<td>3.13</td>
<td>3.29</td>
<td>3.08</td>
<td>3.08</td>
</tr>
<tr>
<td>Health caring</td>
<td>485</td>
<td>2.92</td>
<td>2.77</td>
<td>3.33</td>
<td>3.40</td>
<td>2.42</td>
<td>2.68</td>
<td>3.46</td>
<td>2.74</td>
<td>2.98</td>
</tr>
<tr>
<td>Health technical</td>
<td>76</td>
<td>2.88</td>
<td>2.89</td>
<td>3.43</td>
<td>3.71</td>
<td>2.67</td>
<td>2.57</td>
<td>3.64</td>
<td>3.04</td>
<td>2.67</td>
</tr>
<tr>
<td>Home</td>
<td>89</td>
<td>3.27</td>
<td>3.02</td>
<td>3.66</td>
<td>3.83</td>
<td>2.83</td>
<td>2.48</td>
<td>3.60</td>
<td>2.91</td>
<td>2.79</td>
</tr>
<tr>
<td>Human studies</td>
<td>78</td>
<td>3.37</td>
<td>3.09</td>
<td>3.66</td>
<td>3.83</td>
<td>2.83</td>
<td>2.48</td>
<td>3.60</td>
<td>2.91</td>
<td>2.79</td>
</tr>
<tr>
<td>Law</td>
<td>289</td>
<td>2.97</td>
<td>2.95</td>
<td>3.71</td>
<td>3.69</td>
<td>2.64</td>
<td>2.42</td>
<td>3.68</td>
<td>3.05</td>
<td>2.67</td>
</tr>
<tr>
<td>Office</td>
<td>468</td>
<td>3.13</td>
<td>3.00</td>
<td>3.63</td>
<td>3.69</td>
<td>2.64</td>
<td>2.58</td>
<td>3.55</td>
<td>2.94</td>
<td>2.65</td>
</tr>
<tr>
<td>Out of work</td>
<td>49</td>
<td>3.31</td>
<td>3.08</td>
<td>3.16</td>
<td>3.71</td>
<td>2.69</td>
<td>2.26</td>
<td>3.78</td>
<td>3.12</td>
<td>2.96</td>
</tr>
<tr>
<td>Religion</td>
<td>11</td>
<td>2.73</td>
<td>3.09</td>
<td>3.36</td>
<td>3.36</td>
<td>2.64</td>
<td>3.18</td>
<td>3.18</td>
<td>2.36</td>
<td>2.45</td>
</tr>
<tr>
<td>Repairsments</td>
<td>46</td>
<td>2.93</td>
<td>3.33</td>
<td>3.61</td>
<td>3.59</td>
<td>2.64</td>
<td>2.34</td>
<td>3.08</td>
<td>2.93</td>
<td>3.09</td>
</tr>
<tr>
<td>Security</td>
<td>42</td>
<td>3.14</td>
<td>3.14</td>
<td>3.98</td>
<td>4.12</td>
<td>2.71</td>
<td>2.67</td>
<td>4.07</td>
<td>3.31</td>
<td>2.93</td>
</tr>
<tr>
<td>Teaching</td>
<td>367</td>
<td>3.92</td>
<td>3.14</td>
<td>3.64</td>
<td>3.77</td>
<td>2.49</td>
<td>2.64</td>
<td>3.56</td>
<td>2.85</td>
<td>2.78</td>
</tr>
<tr>
<td>Tourism</td>
<td>24</td>
<td>2.54</td>
<td>3.00</td>
<td>3.83</td>
<td>3.67</td>
<td>2.25</td>
<td>2.43</td>
<td>3.71</td>
<td>3.25</td>
<td>3.04</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Table 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relative frequency of subjects from different professional areas according to categorical affective temperaments.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Depressive</th>
<th>Anxious</th>
<th>Cyclothymic</th>
<th>Dysphoric</th>
<th>Apathetic</th>
<th>Euthymic</th>
<th>Irritable</th>
<th>Labile</th>
<th>Disinhibited</th>
<th>Hyperthymic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lower frequency</td>
<td>–</td>
<td>–</td>
<td>Religion</td>
<td>Health caring</td>
<td>Health Technical</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Security</td>
<td>42</td>
<td>3.14</td>
<td>3.14</td>
<td>3.98</td>
<td>4.12</td>
<td>2.71</td>
<td>2.67</td>
<td>4.07</td>
<td>3.31</td>
<td>2.93</td>
</tr>
<tr>
<td>Teaching</td>
<td>367</td>
<td>3.92</td>
<td>3.14</td>
<td>3.64</td>
<td>3.77</td>
<td>2.49</td>
<td>2.64</td>
<td>3.56</td>
<td>2.85</td>
<td>2.78</td>
</tr>
<tr>
<td>Tourism</td>
<td>24</td>
<td>2.54</td>
<td>3.00</td>
<td>3.83</td>
<td>3.67</td>
<td>2.25</td>
<td>2.43</td>
<td>3.71</td>
<td>3.25</td>
<td>3.04</td>
</tr>
<tr>
<td>&gt;1 occupation</td>
<td>123</td>
<td>2.92</td>
<td>2.85</td>
<td>3.85</td>
<td>3.79</td>
<td>2.58</td>
<td>2.37</td>
<td>3.68</td>
<td>2.98</td>
<td>3.20</td>
</tr>
</tbody>
</table>

In the original validation study of the CEATS, higher drive and control and lower anger, as well as euthymic and hyperthymic temperaments, were associated with fewer personal problems and more advantages. The present results showed that the most positive or healthy profiles were observed in subjects working on fitness, religion and health.
caring areas. Also, their scores on problematic affective temperaments (e.g., cyclothymic, dysphoric, irritable and labile) were lower. Conversely, those out of work (unemployed, retired or on health care) had low drive and control scores, high anger and were more depressive and less hyperthymic.

Some particular findings are noteworthy. Fitness professionals had a healthy and stable externalized profile, which is compatible with the benefits of exercise on brain parameters (e.g. increased neurogenesis) (REF), but may also reflect an adaptive career choice for physically active individuals. Similarly to the Akiskal’s findings of low obsessive traits in artists, our data showed higher disinhibited and labile temperaments in these professionals. However, cyclothymic traits in this group were not as outstanding as in Akiskal’s data. Cyclothymic temperament was more marked in esthetics professionals and those with more than one occupation, as had been noted clinically in the “rule of three” proposed by Akiskal (2005). Finally, compared to office workers, professionals in administration areas, who are hierarchically superior, had lower fear, higher drive, less depressive and anxious, and more hyperthymic traits. These findings agree with the higher prevalence of hyperthymic temperament in executives (Akiskal et al., 2005), predisposing to leadership and eminence (Akiskal and Akiskal, 2007).

The present study has some strengths and limitations. The major strengths were the large sample, the evaluation of many professional areas and the use of short and anonymous self-report instruments. The most important limitation of our study was a selection bias because: 1) the data was collected from a convenience sample by the internet in Brazil, selecting a wealthier and more educated population, and 2) most volunteers assessed the instrument through a psychoeducational website for bipolar spectrum disorders, leading to a higher proportion of cyclothymics, but still 43% of subjects had never received a psychiatric diagnosis. Thus, this sample method tends to bias the results in general towards an emotional profile with more anger, and less control and drive, which are characteristic of cyclothymics (Lara et al., 2008). However, other studies have also used convenient ambulatory patients (Akiskal et al., 2005) rather than the general population. Moreover, temperament is a construct that applies to everyone regardless of socioeconomic variables and psychiatric diagnosis, and the CEATS has the euthymic temperament as an “internal control” of a healthy profile. Also, the method of dividing the professional categories was arbitrary and grouped different professionals together based on common sense of the authors, based on other sources of information of the topic, given the lack of a gold standard procedure for this kind of classification. Finally, a mixed group of professionals within the same area may have obscured differences among specific groups.

5. Conclusion

The present study found specific emotional and affective temperament profiles in a wide range of professions. This information may have clinical utility in the initial evaluation patients, but this applies mostly for the diagnosis of temperament, which is currently neglected in current diagnostic manuals, rather than for categorical diagnosis of psychiatric disorders. In general, this study strengthens the perspective the particular temperaments and traits favor achievement in different professional domains and significantly influence career decisions. As pointed out by Akiskal, this approach is implicit in the ancient Greek concept of temperament as a balance between different attributes (Klibansky et al., 1996). Further studies with general population and specific professional categories are warranted.

Role of funding source

This study has been supported by the FINEP research grant “Rede Instituto Brasileiro de Neurociência (IBN-Net)” #01.06.0842-00 and by a fellowship grant from CNPq, but these institutions had no further role in study design; in the collection, analysis and interpretation of data; in the writing of the report; and in the decision to submit the paper for publication.

Conflict of interest

Lara DR has received honoraria from Abbott, Lilly, AstraZeneca and Novartis. All other authors declare that they have no conflicts of interest.

References


Jackson, S.W., 1986. Melancholia and Depression: From Hippocratic times to modern times, Yale University Press, New Haven, CT.


