

Research report

# Validation of the TEMPS-A Buenos Aires: Spanish psychometric validation of affective temperaments in a population study of Argentina

Gustavo H. Vázquez<sup>a,\*</sup>, Susana Nasetta<sup>b</sup>, Beatriz Mercado<sup>c</sup>, Ester Romero<sup>c</sup>,  
Sonia Tifner<sup>b</sup>, María del L. Ramón<sup>c</sup>, Valentina Garelli<sup>b</sup>, Ana Bonifacio<sup>a</sup>,  
Kareen K. Akiskal<sup>d</sup>, Hagop S. Akiskal<sup>d</sup>

<sup>a</sup> Department of Neuroscience, University of Palermo, Mario Bravo 1259, C.P. 1425, Buenos Aires, Argentina

<sup>b</sup> Faculty of Psychology, National University of San Luis, San Luis, Argentina

<sup>c</sup> Department of Psychology, Catholic University of La Plata, La Plata, Argentina

<sup>d</sup> International Mood Center, La Jolla, CA, USA

Received 6 September 2006; accepted 28 November 2006

Available online 15 February 2007

## Abstract

**Background:** The TEMPS-A (Temperament Evaluation of Memphis, Pisa, Paris and San Diego) is a 110-item questionnaire in five scales which has been translated into over 25 language versions: American, Italian (only for Interview version or TEMPS-I), French, Lebanese, Hungarian, Japanese and Turkish versions have already been validated. There are two Spanish versions, one from Barcelona, and the present one from Buenos Aires. This study represents the first attempt at validating the TEMPS-A in Spanish.

**Methods:** 932 clinically well subjects were studied, of both sexes (62% female) with mean±SD age of 35.4±18.1. Standard psychometric tests of reliability and validation were performed.

**Results:** Chronbach alphas were 0.7 (depressive) and 0.8 (anxious, cyclothymic, irritable and hyperthymic). In exploratory factor analyses, the hyperthymic was distinct from the others. As expected, the depressive and anxious correlated strongly, so did the cyclothymic and anxious. Dominant temperaments ranged from 2.1% to 4.5% of the population under study, except for the hyperthymic which had a negligible rate of 0.2% (but accounted for 13% between +1 SD and +2 SD).

**Limitation:** We did not examine test-to-test reliability.

**Conclusions:** This is the first validation of the TEMPS-A in Spanish, the Buenos Aires version with the original 110 items, with very good psychometric properties.

© 2007 Elsevier B.V. All rights reserved.

**Keywords:** Temperament; Psychometrics; TEMPS-A; Spanish; Argentina

## 1. Introduction

The TEMPS-A (Temperament Evaluation of Memphis, Pisa, Paris and San Diego-Autoquestionnaire) is a 110-item temperament scale in 5 dimensions (depressive, cyclothymic, hyperthymic, irritable and anxious), which

\* Corresponding author. Tel./fax: +54 11 4826 0770.

E-mail address: gvazquez@palermo.edu (G.H. Vázquez).

has been validated in at least seven languages (Placidi et al., 1998; Akiskal and Akiskal, 2005; Karam et al., 2005; Rozsa et al., 2006). Twenty other language versions exist, including two Spanish versions, one from Barcelona (Sanchez-Moreno et al., 2005) and the other from Buenos Aires (Vázquez and Akiskal, 2005). In this study we attempt to validate the latter Argentinean Spanish version.

## 2. Methods

### 2.1. Measures

The autoquestionnaire version of the Temperament Evaluation Memphis, Pisa, Paris and San Diego (TEMPS-A) is a self-report instrument developed by the senior authors (K.K.A. and H.S.A.) of this article (Akiskal et al., 2005a,b). It consists of 110 items that measure affective temperamental traits, present in the subject's whole life, represented in five dimensional scales: depressive, cyclothymic, hyperthymic, irritable and anxious.

The original questionnaire was translated into the Spanish language spoken in Argentina by a professional official public translator. The questionnaire was then back-translated into English by the first author (G.H.V.) and revised by the senior authors (K.K.A. and H.S.A.) of this article. After appropriate corrections for nuance the final version (TEMPS-A Buenos Aires) was published (Vázquez and Akiskal, 2005).

This paper examines the psychometric properties of this instrument. All the procedures were conducted in conformity with the Argentine laws about research.

### 2.2. Subjects

The original sample of the study consisted of 1000 clinically-well Argentine subjects of both sexes in three different cities of our country: Buenos Aires, San Luis and La Plata. All the questionnaires with at least one no-answer in any item, and those with one (or more) double answers in the same item were discarded from the final analysis. The resultant sample consisted of 932 subjects, with a mean age of  $35.96 \pm 18.32$  years. There were 357 men (38.4%), mean age  $36.88 \pm 18.78$  years and 575 women (61.6%), mean age  $35.42 \pm 18.06$  years. 60% of the total sample were single, 29% were married, 5% divorced, 2% separated and 4% widowed.

The majority had completed high school (61%), 18% had a university degree, another 18% had an elementary school completed and the remaining 3% had not completed any formal education. The measure was administered between October and December 2005 to

the subjects by students of the last year of the faculties of psychology at Palermo University (Buenos Aires), National University of San Luis (San Luis), and Catholic University of La Plata (La Plata). All the subjects were volunteers, neighbors of the interviewers at each city, without documented current or past history of major mental disorders or psychiatric treatments.

Subjects were asked to respond to each of the 110 questions positively only if it characterized how they have been much of their lives since at least mid-adolescence.

### 2.3. Statistical analysis

Subjects who had a missing answer on any item of a subscale were excluded from the analysis. Internal consistency was measured through the Chronbach–Alpha coefficient. Factor loading was calculated using the principal component analysis with Varimax rotation, and the cut-off of coefficients was set at 0.3. Correlation among the temperaments was examined using Pearson's bivariate correlation. Differences in scores were tested using student's independent *t*-test, ANOVA, and Chi-square. Finally, standardization was established by calculating *z*-scores. All analysis were conducted using SPSS version 11.5 with a 95% confidence interval.

## 3. Results

### 3.1. Subjects

The questionnaire was administered to 1000 healthy subjects and 932 protocols were completed on all items, only 17% of the total sample was excluded for reasons given above.

### 3.2. Internal consistency and factor analysis

The Chronbach–Alpha coefficients for the depressive, cyclothymic, hyperthymic, irritable, and anxious temperaments were 0.68, 0.81, 0.80, 0.80 and 0.81 respectively.

Table 1  
Psychometrically weakest items

Depressive temperament	
Item # 9	I am the kind of person who does not like change very much
Item # 20	My sex drive has always been low
Hyperthymic temperament	
Item # 47	I have great confidence in myself
Item # 63	Normally less than 6 hour of sleep is enough for me

Table 2

Pearson correlations among the five temperament subscales in the TEMPS-A Buenos Aires

Scale	Depressive	Cyclothymic	Hyperthymic	Irritable
Cyclothymic Pearson correlation (sig)	.487** (.000)			
Hyperthymic Pearson correlation (sig)	–.161** (.000)	.083* (.011)		
Irritable Pearson correlation (sig)	.311** (.000)	.598** (.000)	.111** (.001)	
Anxious Pearson correlation (sig)	.572** (.000)	.570** (.000)	–.003 (.917)	.470** (.000)

\*\* The correlation is significant at level 0.01 (bilateral).

\* The correlation is significant at level 0.05 (bilateral).

The results of the factor analysis are shown in the Appendix A. Only four items (two depressive and two hyperthymic) with a factor loading  $<0.2$  were considered psychometrically weak (Table 1) and should be deleted from the TEMPS-A Buenos Aires. Items with an absolute factor loading equal or greater to 0.3 were first retained, and those with a factor loading equal or greater to 0.4 are displayed in a proposed Buenos Aires clinical version of TEMPS-A (Appendix A).

### 3.3. Correlations between temperaments

The correlations among the five temperament subscales are shown in Table 2. Most of the temperaments were associated with each other. The strongest positive correlation was observed between the irritable and the cyclothymic temperament ( $R=0.598$ ), as well as that of the anxious and cyclothymic ( $R=0.570$ ), and the strongest negative correlation was detected between the depressive and the hyperthymic temperament ( $R=-0.161$ ). It is also noteworthy that the depressive correlated positively with all the other temperaments, particularly the anxious and cyclothymic. There was no correlation between the anxious and the hyperthymic temperament ( $R=-0.003$ ).

In order to study the factorial structure of the subscales, we made an exploratory factor analysis with Varimax rotation (Table 3). We have found two principal components, one with highest factorial loading in the

Table 3  
Exploratory factor analysis

Temperaments	Factor I	Factor II
Cyclothymic	.849	
Hyperthymic		.927
Irritable	.745	
Anxious	.832	
Depressive	.734	

N=932.

hyperthymic scale, the other which subsumes the remainder of the temperament. The lowest factorial loading has corresponded to the irritable and depressive scales (Table 3).

### 3.4. Mean scores and standard deviations

The mean scores and standard deviation (SD) for each temperament was determined for both sexes. Differences in scores between genders were tested using student's independent *t*-test. Females presented significantly higher scores than males for the anxious ( $t=5.71$ ;  $p=.001$ ) and depressive ( $t=5.17$ ;  $p=.001$ ) temperament, whereas males showed hyperthymic temperament scores significantly higher than females ( $t=-4.92$ ;  $p=.001$ ). Males also presented almost significant higher scores of irritable temperament ( $t=-1.91$ ;  $p=.05$ ). There were no statistically significant gender differences in the frequency of dominant cyclothymic temperament in our sample (Table 4).

Table 4

Means, number of subjects, standard deviations and student's *t*-test values of scores by gender

	Depressive	Cyclothymic	Hyperthymic	Irritable	Anxious
<i>Female</i>					
Mean	8.02	7.13	10.57	5.03	9.09
N	575	575	575	575	575
SD	3.354	4.426	4.472	3.653	5.015
<i>Male</i>					
Mean	7.14	7.05	11.95	5.49	7.49
N	357	357	357	357	357
SD	3.168	4.260	4.544	3.944	4.530
<i>t</i>	5.17***	0.28	–4.92***	–1.91*	5.71***
<i>Total</i>					
Mean	7.69	7.12	11.10	5.22	8.48
N	932	932	932	932	932
SD	3.305	4.376	4.542	3.776	4.886

\*\*\* $p=.001$ ; \* $p=.05$ .

Table 5

Number of respondents and percentage inside the distribution, with Z-scores above +1 SD and above +2 SD on each of the temperaments

	Inside the distribution	+1 SD	+2 SD
Depressive	812 (87.1%)	88 (9.4%)	32 (3.4%)
Cyclothymic	809 (86.8%)	103 (11.1%)	20 (2.1%)
Hyperthymic	808 (86.7%)	122 (13.1%)	2 (0.2%)
Irritable	804 (86.3%)	86 (9.2%)	42 (4.5%)
Anxious	816 (87.6%)	87 (9.3%)	29 (3.1%)

The cut-off scores above positive 2 SD and the prevalence of the dominant temperaments are as follows (Table 5): 3.4% for depressive temperament, 2.1% for cyclothymic temperament, 0.2% for hyperthymic temperament, 4.5% for irritable temperament and 3.1% for the anxious temperament. It is noteworthy that despite the extremely low prevalence of the hyperthymic temperament as judged by +2 SD scores, a hefty 13% of subjects fall within +1 SD and +2 SD for this temperament.

#### 4. Discussion

The findings of the Buenos Aires version of the TEMPS-A are overall similar to other language versions such as the American (Akiskal et al., 2005a,b), German (Erfurth et al., 2005,b), Hungarian (Rozsa et al., 2006), Japanese (Matsumoto et al., 2005), Lebanese (Karam et al., 2005) and Turkish versions (Vahip et al., 2005), in showing good to excellent reliability and validity; furthermore, only a handful of items need to be dropped from the 110-item version because of psychometric weakness. Nonetheless, we have conservatively retained, for the Buenos Aires clinical version, the more robust version (71 of the original 110) with items of loading  $\geq 0.40$  (Appendix A).

Exploratory factor analysis has shown that the hyperthymic is quite distinct from the depressive, anxious, cyclothymic and irritable types. This is reflected, in the Hungarian TEMPS-A, with association of the latter temperaments with the s-allele of the serotonin transporter, not observed in the hyperthymic (Gonda et al., 2006). Thus, the four temperaments, but not the hyperthymic, correlate significantly with one another, the highest correlations being (as expected) between the depressive and anxious, anxious and cyclothymic, and cyclothymic and irritable. Gender differences, too, appear in the main similar to other national groups, i.e. females more anxious and depressive, males more hyperthymic and irritable.

It is beyond the scope of this paper to compare the prevalence of dominant temperaments between Argentina and other countries. Such comparisons would require

taking the sampling methods of each national group into consideration, which we leave for another occasion. Nonetheless, it is noteworthy that the very low rate of the hyperthymic is “compensated” by a high rate of subjects with this temperament between +1 SD and +2 SD, similar to the Italians (Placidi et al., 1998) and the Lebanese (Karam et al., 2005).

#### Appendix A. TEMPS-A Buenos Aires Clinical Version. Factor loadings of each temperament after Varimax rotation shown between brackets and English back-translation shown below

- D1. Soy una persona triste, infeliz. (0.69)  
I am a sad, unhappy person.
- D2. La gente me dice que soy incapaz de ver el lado bueno de las cosas (0.67)  
People tell me I am unable to see the positive side of things.
- D4. Pienso que a menudo las cosas salen mal (0.54)  
I think things often tend to get worse.
- D5. Abandono fácilmente. (0.53)  
I quit easily.
- D6. Desde siempre me he sentido un fracasado (0.46)  
I have always felt I am a failure.
- D10. Cuando estoy en grupo prefiero escuchar a los demás (0.46)  
When I am in a group I prefer hearing others talk.
- D13. Me siento fácilmente herido por las críticas o el rechazo (0.44)  
I feel easily hurt by criticism or rejection.
- D14. Soy el tipo de persona con la que siempre se puede contar. (0.44)  
I'm the kind of person one can always count on.
- D15. Pongo las necesidades de los demás por encima de las mías (0.57)  
I place the needs of others above my own.
- D17. Preferiría trabajar para otra persona que ser el jefe. (0.78)  
I'd rather work for some other person than be the boss.
- D18. Es natural en mí ser pulcro y organizado (0.61)  
I am tidy and organized by nature.
- D19. Soy el tipo de persona que duda de todo (0.54)  
I'm the kind of person who doubts everything.
- D21. Normalmente necesito dormir más de 9 horas (0.66)  
I normally need to sleep more than nine hours.
- C22. A menudo me siento cansado sin motivo. (0.40)  
I often feel tired for no reason.
- C23. Tengo cambios repentinos de humor y energía. (0.66)  
I experience sudden shifts in mood and energy.

- C24. Mi ánimo y energía son altos o bajos, raramente entre esos dos extremos. (0.49)  
My spirits and energy are normally either high or low, rarely normal.
- C26. Puedo pasar de que alguien me guste mucho a perder totalmente el interés en esa persona. (0.68)  
I can shift from liking someone a lot to completely losing interest in that person.
- C27. A menudo exploto con la gente y luego me siento culpable. (0.45)  
I often snap at people and then feel guilty about my behavior.
- C28. A menudo empiezo cosas perdiendo el interés antes de acabarlas. (0.49)  
I often start things, then lose interest before completing them.
- C29. Mi estado de ánimo cambia a menudo sin ningún motivo. (0.66)  
My mood often changes for no reason.
- C30. Paso constantemente de ser vital a estar perezoso (0.46)  
I constantly switch between being energetic and idle.
- C31. A veces me voy a la cama triste pero me levanto por la mañana sintiéndome fantástico (0.65)  
I sometimes go to bed feeling sad, but wake up in the morning feeling great.
- C32. A veces me voy a la cama sintiéndome genial y me levanto por la mañana sintiendo que no vale la pena vivir. (0.43)  
Sometimes I go to bed feeling great, but wake up in the morning feeling that life is not worth living.
- C33. Me dicen que a menudo me pongo pesimista y que olvido los tiempos felices del pasado (0.51)  
I am told that I often get pessimistic, and forget my previous happy experiences.
- C34. Paso de tener mucha confianza en mí mismo a sentirme inseguro (0.61)  
I switch between feeling highly confident and feeling insecure.
- C37. Mi necesidad de dormir cambia mucho, pasando de necesitar unas pocas horas de sueño a más de 9 horas (0.60)  
My sleeping needs vary greatly, from a few hours to more than nine hours.
- C41. A menudo tengo un fuerte impulso por hacer cosas escandalosas (0.41)  
I often feel a strong drive to do outrageous things.
- C42. Soy el tipo de persona que se enamora y se desenamora fácilmente (0.73)  
I'm the kind of person who falls in and out of love easily.
- H45. Me gusta contar chistes, la gente dice que soy divertido. (0.53)  
I like telling jokes, people say I'm fun.
- H48. A menudo tengo ideas brillantes. (0.56)  
I often have brilliant ideas.
- H51. Tengo un don para el habla, convengo e inspiro a los demás. (0.46)  
I have a gift for speech, I can convince and inspire others.
- H52. Me gusta emprender nuevos proyectos, aunque sean arriesgados. (0.59)  
I like undertaking new projects, even if they are risky.
- H54. Me siento totalmente cómodo incluso estando con personas que apenas conozco (0.66)  
I feel completely at ease, even with people I hardly know.
- H55. Me encanta estar con mucha gente. (0.68)  
I love being with a lot of people.
- H56. La gente me dice que a menudo meto la nariz en los asuntos de los demás (0.53)  
People tell me that sometimes I meddle in others' business.
- H57. La gente me considera una persona generosa, que gasta mucho dinero en los demás. (0.42)  
People consider me a generous person who spends lots of money on others.
- H58. Tengo habilidades y conocimientos en muchas áreas. (0.66)  
I have skills and expertise in many areas.
- H59. Siento que tengo el derecho y el privilegio de hacer lo que quiera (0.74)  
I feel I have the right and the privilege to do whatever I please.
- H61. Cuando no estoy de acuerdo con alguien puedo meterme en una discusión acalorada (0.44)  
When I don't agree with someone, I can get into a heated argument.
- H62. Mi deseo sexual es siempre alto (0.66)  
My sexual drive is always high.
- I65. Soy una persona insatisfecha por naturaleza (0.54)  
I'm a dissatisfied person by nature.
- I68. A menudo me siento impaciente (0.62)  
I often feel edgy.
- I69. A menudo me siento tenso (0.62)  
I often feel uptight.
- I71. A menudo me enfado tanto que lo destrozaría todo (0.48)  
I often feel so angry that I will destroy everything.
- I72. Cuando estoy de malhumor podría meterme en una pelea (0.64)  
When I'm in a bad mood I could get into a fight.
- I73. La gente me dice que exploto por nada (0.59)  
People tell me I explode for no reason.
- I74. Cuando me enoja respondo bruscamente (0.64)



When I get mad I answer brusquely.

I75. Me gusta tomarle el pelo a la gente, incluso a la que apenas conozco (0.62)

I like to make fun of people, even those I hardly know.

I76. Mi humor ácido me ha metido en problemas (0.63)

My caustic humor has gotten me into trouble.

I77. Puedo ponerme tan furioso que podría herir a alguien (0.55)

I can get so furious that I could hurt someone.

I83. Mi deseo sexual es a menudo tan intenso que llega a ser realmente desagradable (0.58)

My sexual drive is often so intense that it is really unpleasant.

I84. (Mujeres solo): Tengo ataques incontrolables de ira antes de la menstruación (0.66)

(Women only): I have fits of uncontrollable rage just before my period.

A85. Que yo recuerde siempre he sido una persona aprensiva (0.74)

As far as I remember, I've always been an overanxious person.

A86. Me preocupo siempre por una cosa u otra (0.59)

I'm always worried about everything.

A87. Me siguen preocupando cosas cotidianas que los demás consideran poco importantes (0.70)

I continue to worry about every-day matters others consider of little importance.

A88. No puedo hacer nada para dejar de preocuparme (0.65)

I cannot help worrying.

A89. Mucha gente me ha dicho que no me preocupe tanto (0.73)

Many people have told me I should not worry so much.

A90. Cuando estoy estresado, a menudo mi mente se queda en blanco (0.52)

When I'm stressed, my mind often goes blank.

A92. A menudo me siento muy inquieto por dentro (0.64)

I often feel nervy inside.

A93. Cuando estoy estresado, a menudo me tiemblan las manos (0.62)

When I'm stressed, my hands often tremble.

A95. Cuando estoy nervioso, puedo tener diarrea (0.83)

When I feel nervous, I may have diarrhea.

A97. Cuando estoy nervioso, tengo que ir con frecuencia al baño (0.82)

When I am nervous, I go to the bathroom more frequently.

A98. Cuando alguien tarda en volver a casa temo que haya tenido un accidente (0.63)

When someone is late coming home, I fear they have had an accident.

A99. A menudo temo que alguien de mi familia contraiga una enfermedad grave (0.77)

I often fear someone in my family may contract a serious disease.

A100. Siempre estoy pensando que alguien pueda darme malas noticias sobre un miembro de mi familia (0.71)

I am always thinking I may receive bad news about a family member.

A101. Mi sueño no es descansado (0.67)

I do not rest well while I sleep.

A102. Frecuentemente tengo dificultad para dormirme (0.69)

I frequently have difficulty falling asleep.

A103. Soy, por naturaleza, una persona muy cautelosa (0.67)

I am a cautious person by nature.

A107. Soy una persona insegura (0.72)

I am an insecure person.

A109. Cuando manejo, incluso aunque no he hecho nada incorrecto, tengo miedo de que la policía pueda pararme (0.63)

When I drive, I fear the police may stop me, even when I have not done anything wrong.

A110. Los ruidos inesperados me sobresaltan fácilmente (0.55)

Sudden noises alarm me easily.

## References

- Akiskal, H.S., Akiskal, K.K., 2005. Special issue: TEMPS: Temperament Evaluation of Memphis, Pisa, Paris and San Diego. *J. Affect. Disord.* 85 (1–2), 1–242.
- Akiskal, H.S., Akiskal, K.K., Haykal, R., Manning, J.S., Connor, P., 2005a. TEMPS-A: progress towards validation of a self-rated clinical version of the temperament evaluation of the Memphis, Pisa, Paris, and San Diego Autoquestionnaire. *J. Affect. Disord.* 85, 3–16.
- Akiskal, H.S., Mendlowicz, M.V., Jean-Louis, G., Rapaport, M.H., Kelsoe, J.R., Gillin, J.C., Smith, T.L., 2005b. TEMPS-A: validation of a short version of a self-rated instrument designed to measure variations in temperament. *J. Affect. Disord.* 85, 45–52.
- Erfurth, A., Gerlach, A.L., Hellweg, I., Boenigk, I., Michael, N., Akiskal, H.S., 2005. Studies on a German (Munster) version of the temperament autoquestionnaire TEMPS-A: construction and validation of the brief TEMPS-M. *J. Affect. Disord.* 85, 53–69.
- Gonda, X., Rihmer, Z., Zsombok, T., Bagdy, G., Akiskal, K.K., Akiskal, H.S., 2006. 5HTTLPR polymorphism of the serotonin transporter gene is associated with affective temperaments as measured by TEMPS-A. *J. Affect. Disord.* 91, 125–131.
- Karam, E.G., Mneimneh, Z., Salamoun, M., Akiskal, K.K., Akiskal, H.S., 2005. Psychometric properties of the Lebanese–Arabic TEMPS-A: a national epidemiologic study. *J. Affect. Disord.* 87, 169–183.

- Matsumoto, S., Akiyama, T., Tsuda, H., Miyake, Y., Kawamura, Y., Akiskal, K.K., Akiskal, H.S., 2005. Reliability and validity of the TEMPS-A in a Japanese non-clinical population: application to unipolar and bipolar depressives. *J. Affect. Disord.* 85, 85–92.
- Placidi, G.F., Signoretta, S., Liguori, A., Gervasi, R., Maremmani, I., Akiskal, H.S., 1998. The semi-structured affective temperament interview (TEMPS-I): reliability and psychometric properties in 1010 14–26 year students. *J. Affect. Disord.* 47, 1–10.
- Rozsa, S., Rihmer, A., Ko, N., Gonda, X., Szili, I., Szadoczky, E., Pestalitiy, P., Rihmer, Z., 2006. Affective temperaments: psychometric properties of the Hungarian TEMPS-A. *Psychiatr. Hung.* 21, 147–160.
- Sanchez-Moreno, J., Barrantes-Vidal, N., Vieta, E., Martinez-Aran, A., Saiz-Ruiz, J., Montes, J.M., Akiskal, K., Akiskal, H.S., 2005. Process of adaptation to Spanish of the Temperament Evaluation of Memphis, Pisa, Paris and San Diego Scale. Self applied version (TEMPS-A). *Actas Esp. Psiquiatr.* 33, 325–330.
- Vahip, S., Kesebir, S., Alkan, M., Yazic, O., Akiskal, K., Akiskal, H.S., 2005. Affective temperaments in clinically-well subjects in Turkey: initial psychometric data on the TEMPS-A. *J. Affect. Disord.* 85, 113–125.
- Vazquez, G.H., Akiskal, H., 2005. The temperament evaluation of the Memphis, Pisa, Paris, and San Diego autoquestionnaire, Argentine version (TEMPS-A Buenos Aires). *Vertex, Rev. Argent. Psiquiatr.* 16, 89–94.