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Preliminary Analysis and Normative Data of the State-Trait Anxiety Inventory (STAI) in Adolescent and Adults of Santiago, Chile

Análisis Preliminar y Datos Normativos del Cuestionario de Ansiedad Estado-Rasgo en Adolescentes y Adultos de la Ciudad de Santiago de Chile

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Resumen

El estudio reporta los análisis preliminares y datos normativos, para una muestra de población general del Cuestionario de Ansiedad Estado Rasgo (Spielberger, Gorsuch & Lushene, 1970). Los datos fueron obtenidos de una muestra total de 1488 personas entre 13 y 60 años de edad. La consistencia interna obtenida fue .92, para STAI-S y .87 para STAI-R. Del análisis factorial confirmatorio se obtienen dos factores para cada escala. Finalmente, se realizan análisis de comparación de medias para la obtención de datos normativos, para la muestra total diferenciada por sexo y para la muestra de adolescentes y adultos.

Palabras Claves: Estudio instrumental, estado, rasgo, ansiedad

Abstract

The present study reports the preliminary analyses and normative data of the State-Trait anxiety inventory (Spielberger, Gorsuch & Lushene, 1970), for a Chilean, general population sample. Data were obtained from a total sample of 1488 people, between 13 and 60 years old. A high internal consistency for STAI-S .92 and for STAI-T .87 is reported. Two factors were obtained from the confirmatory factorial analysis. Finally, analyses of the means were carried out, obtaining normative data for the total sample, differentiated by sex, and for the adolescents and adults sample.

Key Words: Instrumental study, state, trait, anxiety

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Introduction

Recent studies, point out that among emotional dysfunctions, anxiety is the most prevalent in the population. In an international survey carried out among 2001-2003, which consisted in 15 studies in 14 countries of America, Europe and Asia, on a total of 60.463 adults participants, anxiety disorders revealed to be the most frequent in most of the countries with a prevalence from 2,4% to 18,2% (Kessler & Ustun, 2004). The International Consortium in Psychiatric Epidemiology (ICPE), reports data obtained in seven countries of North America (Canada and the United States), Latin America (Brazil and Mexico) and Europe (Germany, Scandinavians countries, and Turkey). Comparisons on the prevalence data along life time and the recent prevalence of mental illnesses showed that, among data of cronicity of mental dysfunctions, anxiety dysfunctions were always higher than mood dysfunctions or those related with the use of substances. In the same way, the anxious dysfunctions also overcame the age of beginning, with medium of 15 years, in comparison to the 26 years of the mood dysfunctions and 21 years for abuse of substances dysfunctions (OMS, 2000).

Particularly for Chile, Vicente, Rioseco, Saldivia, Kohn y Torres (2002), report the prevalence of psychiatric disorders in two representative Chilean samples, the most common lifetime diagnoses were agoraphobia with 11%, major depressive disorders in 9%, dysthymia in 8%. Other study show in Chile a high prevalence in generalized anxiety dysfunctions, with means along lifetime and during the last year, estimated in 2,6 and in 1,6% (Kohn, et al. 2005).

These data highlights the relevance of to investigate, to understand, to evaluate and to develop effective interventions and empirically validated strategies for treating anxiety disorders, in an international level and especially in Chile (Vera-Villarroel & Mustaca, 2006; Chambless & Ollendick, 2001).

For this purpose, it is of great importance to have reliable and valid evaluation systems, verified in different populations and cultures. In investigation, the questionnaires, inventories and scales have been the most used, for this matter (Martínez-Sánchez, et al., 1995). Among them, State Trait Anxiety Inventory (STAI, Spielberger et al., 1970) is one of the most used one (Martínez-Sánchez, et al., 1995). Already in 1993, it was known of 3300 scientific studies that used the STAI and it adapted version for children STAI C, in topics from clinical psychology to sport psychology, and from medicine to psychiatry (Gauthier & Bouchard, 1993).

State anxiety (A-State) is conceptualized as a transitory emotional state that is characterized by subjective, consciously perceived feelings of tension and apprehension, and heightened autonomic nervous system activity (Spielberger et al., 1970). Trait anxiety (A-Trait) refers to relatively stable individual differences in anxiety proneness, that is,

differences between people in the tendency to respond to situations perceived as threatening with elevations in A-State intensity (Spielberger et al., 1970).

Although anxiety is an universal emotion, it has been demonstrated that the context in which is experienced, the interpretation of its meaning, and the answers to it, are strongly influenced by cultural beliefs and practices (Kirmayer, Young, & Hayton, 1995, in Hishinuma, Miyamoto, Nishimura & Nahulu, 2000). In this sense, are relevant crosscultural studies about anxiety and of their evaluation methods. Although, internationally is reported that STAI shows appropriate psychometric properties in different samples (Gauthier & Bouchard, 1993; Novy, Nelson, Smith, Rogers & Rowzee, 1995, Hishinuma et al. 2000; Barnes, Harp & Sik, 2002; Samuel, 2002); in the same way, investigations have found that some of the items of the STAI have different meanings through the culture (Shek, 1993).

In Chile, excepting a under-graduated thesis that reported appropriate psychometric properties for STAI Y (alpha State .91, Trate .88, with a solution of 8 factors that explained 56.5% of the variance) (Jimenez, Piña & Greppi, 1993) there are not available publications for the scientific community related with the properties of STAI. That is why the objective of this study is to report the psychometric properties of STAI X, as well as preliminary norms for the Chilean population.

Method

Subjects

The sample was conformed of 1488 people from Santiago of Chile. They were 445 adolescents, 204 females and 241 males, with ages between 13 and 18 years old (mean of 16.40, SD= 1.40), and 1043 adults, 489 females and 553 male, with ages between 19 and 60 years old (mean 31.02, SD= 11.68).

Instruments

The State-trait Anxiety Inventory (STAI- X) (Spielberger, Gorsuch & Lushene, 1970).

Spielberger defines State anxiety as a transitory emotional response involving unpleasant feelings of tension and apprehensive thoughts. Trait anxiety, on the other hand, was defined as a personality trait referring to individual differences in the likelihood that a person would experience state anxiety in stressful situation. In this way, STAI separate the intensity of the transitory experience in specific situation (or limited time frame) from individual differences in the likelihood of experiencing anxiety across different situations, both developed as unidimensional measures (Spielberger, et al., 1970).

The STAI consist on a report measure, with two scales of 20 item each, that assess state and trait levels of anxiety. In subscale State respondents indicate how much each statement reflects how they feel right now, at this moment. The subject should mark the number from 0 to 3, state goes between "Nothing" (Nada), "Some" (Algo), "Much" (Bastante) and "Very much" (Mucho). In Trait subscale respondents indicate how they generally feel on a four point likert-type scales from 0 to 3. Response options goes between "Almost never" (Casi Nunca), "Sometimes" (A veces), "Often" (A menudo), "Almost always" (Casi siempre).

Both scales can be administered in 10 minutes. Anxieties absent items are reverse-score, and 20 items of each scale are then summed for total scores.

The statistical data concerning the original test support its use (Spielberger *et al.*, 1970). In the Spanish adaptation of this scale (Bermúdez, 1978a, 1978b), the internal consistency values for normal and clinical samples are similar to those of the original study, ranging between .82 and .92, which also occurs in the test-retest values between .70 and .80. The concurrent and divergent validity indexes obtained for the Spanish adaptation corroborate the STAI's high psychometric power (Bermúdez, 1978a, 1978b; Iglesias, 1982).

Means and norms: The north american manual reports for sample of working adults: men had a mean STAI S score

of 35.72 (SD= 10.40) and mean STAI T score of 34.89 (SD=9.19); women had a mean STAI S score of 35.20 (SD=10.61) and a mean STAI T score of 34.79 (SD= 9.22) (Spielberger *et al.*, 1970).

Procedure

Adolescents participants were tested during normal class hours, adults were tested in different public places as their works. The objectives of the study were explained to the participants, providing each participant with the inventory with the consent form in the front page, if they accepted to participate they continued with the questionnaire below.

Results

The mean, standard deviations and alpha coefficient for the total sample and for separate groups (adults and adolescents), are reported on table 1 for State and table 2 for Trait. The media scores for the STAI State scale total sample was of 19.07 (S.D. = 11.10), for adolescent was 22.10 (S.D. = 10.64) and adults was 17.78 (S.D.= 11.06). Media for the Trait scales for total sample was of 22.76 (S.D.=10.16), for adolescents was 25.88 (S.D.= 9.48) and adults was 21.43 (S.D.=10.17).

Table 1
Means, Standard deviations, alpha coefficients and correlation item-total for STAI-S, for total, adolescents and adults sample

	Total				Adolescents				Adults			
	Mean	S.D.	α		Mean	S.D.	α		Mean	S.D.	α	
STAI-S	19.07	11.10	.92		22.10	10.64	.90		17.78	11.06	.93	
	Mean	S.D.	α	$r_{\text{item-total}}$	Mean	S.D.	α	$r_{\text{item-total}}$	Mean	S.D.	α	$r_{\text{item-total}}$
1. Me siento calmado	2.09	.82	.92	.63	1.81	.92	.90	.58	2.05	.81	.92	.64
2. Me siento seguro	1.04	.84	.92	.68	1.76	.89	.90	.61	2.09	.80	.92	.70
3. Estoy tenso	.77	.84	.92	.55	.94	.92	.90	.60	.84	1.07	.93	.53
4. Estoy contrariado	1.20	1.10	.92	.57	.77	.80	.90	.47	.63	1.52	.92	.61
5. Me siento cómodo (a gusto)	1.15	.94	.92	.62	1.75	.91	.90	.61	1.96	.86	.92	.62
6. Me siento alterado	1.27	1.03	.92	.57	.55	.84	.90	.50	.3	.69	.92	.60
7. Me siento preocupado ahora por posibles desgracias futuras	1.79	1.10	.92	.51	1.08	1.07	.90	.48	.77	.95	.93	.51
8. Me siento descansado	.89	.92	.92	.48	1.08	.87	.90	.39	1.23	.90	.93	.51
9. Me siento angustiado	1.15	.95	.92	.67	.72	.85	.90	.61	.55	.80	.92	.70
10. Me siento confortable	2.15	.86	.92	.64	1.52	.94	.90	.54	1.76	.88	.92	.68
11. Tengo confianza en mí mismo	1.81	1.12	.92	.53	1.89	.92	.90	.46	2.30	.77	.93	.55
12. Me siento nervioso	1.17	1.00	.92	.60	.91	.95	.90	.55	.73	.87	.92	.62
13. Estoy desasosegado	1.81	.91	.92	.31	.80	.83	.91	.29	.76	.85	.93	.32
14. Me siento muy "atado" (como oprimido)	1.01	.94	.92	.65	.90	.94	.90	.59	.59	.86	.92	.66
15. Estoy relajado	.85	1.03	.92	.65	1.47	.98	.90	.57	1.61	.92	.92	.69
16. Me siento satisfecho	1.81	.90	.92	.64	1.56	.89	.90	.56	1.92	.85	.92	.67
17. Estoy preocupado	1.02	.94	.92	.63	1.31	1.01	.90	.53	1.01	.90	.92	.67
18. Me siento aturdido y sobreexcitado	1.32	1.07	.92	.52	.66	.84	.90	.50	.40	.70	.93	.52
19. Me siento alegre	1.95	.92	.92	.60	1.80	.99	.90	.56	1.90	.91	.92	.63
20. En este momento me siento bien	1.28	.93	.92	.72	1.90	.97	.89	.70	2.13	.87	.92	.72

Table 2
Means, Standard deviations, alpha coefficients and correlation item-total for STAI-R, for total, adolescents and adults sample

STAI-R	Total				Adolescents				Adults			
	Mean	S.D.	α		Mean	S.D.	α		Mean	S.D.	α	
	22.76	10.16	.87		25.88	9.48	.84		21.43	10.17	.87	
	Mean	S.D.	α	$r_{\text{item-total}}$	Mean	S.D.	α	$r_{\text{item-total}}$	Mean	S.D.	α	$r_{\text{item-total}}$
21. Me siento bien	1.98	.85	.86	.58	1.91	.89	.83	.53	2.16	.78	.86	.59
22. Me canso rápidamente	1.99	.84	.86	.41	1.15	.88	.84	.32	1.90	.81	.87	.43
23. Siento ganas de llorar	.87	1.02	.86	.53	.97	.93	.83	.53	.68	.79	.86	.52
24. Me gustaría se tan feliz como otros	.67	1.35	.86	.45	1.27	1.13	.83	.51	1.17	1.09	.87	.44
25. Pierdo oportunidades por no decidirme pronto	1.90	.88	.86	.45	1.38	.97	.84	.38	1.05	.91	.87	.46
26. Me siento descansado	.44	.74	.87	.38	1.16	1.28	.84	.29	1.34	.90	.87	.39
27. Soy una persona tranquila, serena y sosegada	.86	1.00	.87	.30	1.60	1.40	.84	.25	1.87	.94	.87	.29
28. Veo que las dificultades se amontonan y no puedo con ellas	1.19	.89	.86	.59	1.09	.92	.83	.51	.80	.91	.86	.61
29. Me preocupo demasiado por cada cosa sin importancia	.60	.81	.86	.48	1.35	.94	.84	.38	1.07	.95	.87	.50
30. Soy feliz	1.69	.90	.86	.57	2.04	.92	.83	.56	2.19	.84	.86	.57
31. Suelo tomar las cosas demasiado seriamente	2.17	.84	.88	.11	1.68	.97	.85	.15	1.86	1.25	.88	.12
32. Me falta confianza en mí mismo	.78	.90	.86	.60	1.32	1.01	.83	.51	1.11	.99	.86	.64
33. Me siento seguro	.77	.84	.86	.58	1.60	.89	.83	.51	1.90	.90	.86	.59
34. Evito enfrentarme a las crisis o dificultades	.69	.89	.87	.29	1.14	.94	.84	.20	.96	.94	.87	.31
35. Me siento triste (melancólico)	1.57	.94	.86	.48	.98	.91	.83	.58	.79	1.08	.87	.44
36. Estoy satisfecho	1.81	.88	.86	.58	1.55	.86	.83	.49	1.92	.89	.86	.60
37. Me rondan y molestan pensamientos sin importancia	1.10	.94	.86	.56	1.27	.92	.83	.44	.91	.93	.86	.59
38. Me afectan tanto los engaños, que no puedo olvidarlos	.48	.75	.86	.47	1.49	1.06	.83	.43	1.25	1.08	.87	.48
39. Soy una persona estable	1.87	.93	.86	.59	1.71	.92	.83	.47	2.05	.90	.86	.53
40. Cuando pienso sobre asuntos y preocupaciones actuales, me pongo tenso y agitado	2.06	.91	.86	.54	1.42	.94	.83	.42	1.22	.91	.86	.58

Alpha coefficient for State scale, for total sample was of .92 and for Trait scale was of .87. For sub-samples, in both scales a higher alfa was found for the adults group. The item-total correlation for the State scale fluctuated between .31 and .72, and for the Trait scale went between .11 y .60.

Factor structure analysis

The results of the factorial analysis by main axis are presented in the table 3 for the total sample. For the STAI-S, arises a main factor that explains 45.37% of the total variance, this factor groups almost all the items, excepting items "Estoy contrariado" y "Estoy desasosegado". After the oblique rotation (Promax), two factors emerged, the first one explains 36.81% of the variance, in which all the items that point to the absence of anxious symptoms saturate; the second factor explains 8.56% of the variance and it contains the entirety of the items that evaluate anxious symptoms presence.

In the Table 3, factorial analysis for STAI-S is presented separated for adults and adolescents main axes and Promax

rotation. For the adolescents, after the factorial analysis for main axis without rotation, it is observed a main factor that explains 42.47% of the variance, in which load most of the items, excepting the item "Me siento desasosegado" which presents a saturation smaller than .40. After forcing the analysis, two factors arise, the first of them conformed by items of absence of anxious symptoms, explaining a 31.84% of the variance, and the second conformed by anxious presence items that explains 10.63% of the variance.

For adults, in the factorial analysis for main axes, is observed a main factor that explains 46.60% of the variance, in which load most of the factors, excepting the item "Estoy contrariado", "Estoy desasosegado" with inferior loads than .40. In the forced analysis two factors, arise the first one, constituted by the items of absence of anxiety, with 38.60% of the explained variance, except "Me siento descansado", and the items of presence of anxious symptoms, except "Estoy contrariado", explaining 8% of the variance.

Table 3
Factor Analyses of the STAI-S, based on principal axis with Promax rotation, for total, adolescents and adults sample

STAI-S	Total				Adolescents				Adults			
	Main Axis Analysis		Promax Rotation		Main Axis Analysis		Promax Rotation		Main Axis Analysis		Promax Rotation	
	Factor 1	Factor 2	Factor 1	Factor 2	Factor 1	Factor 2	Factor 1	Factor 2	Factor 1	Factor 2	Factor 1	Factor 2
Items ¹												
20. En este momento me siento bien	.75		.79	-.52	.74		.77	-.49	.76		.80	-.53
2. Me siento seguro	.71		.73	-.51	.65		.69	-.41	.73		.74	-.54
10. Me siento confortable	.69		.78		.58	.45	.72		.72		.79	-.45
15. Estoy relajado	.69		.72	-.47	.59		.64		.73		.76	-.52
16. Me siento satisfecho	.68		.75	-.42	.60		.69		.70		.77	-.44
9. Me siento angustiado	-.67		-.52	.71	-.61		-.40	.67	-.69		-.55	.73
1. Me siento calmado	.66		.64	-.52	.61		.55	-.50	.67		.67	-.52
5. Me siento cómodo (a gusto)	.65		.71	-.41	.63		.70		.65		.71	-.42
14. Me siento muy "atado" (como oprimido)	-.65		-.50	.69	-.58		-.42	.60	-.67		-.52	.72
19. Me siento alegre	.64		.73		.60	.40	.72		.66		.74	
17. Estoy preocupado	-.63		-.49	.68	-.54			.61	-.66		-.53	.70
12. Me siento nervioso	-.61	.42	-.40	.74	-.58	.41		.71	-.62	.43	-.42	.75
6. Me siento alterado	-.58	.43		.72	-.53	.47		.69	-.61	.41	-.43	.73
11. Tengo confianza en mí mismo	.56		.61		.50		.57		.57		.61	
3. Estoy tenso	-.56		-.42	.62	-.62			.71	-.55		-.44	.59
18. Me siento aturdido y sobreexcitado	-.52	.42		.66	-.49	.44		.65	-.52	.41		.66
7. Me siento preocupado ahora por posibles desgracias futuras	-.52			.58	-.48			.53	-.52			.58
8. Me siento descansado	.51		.56		.43		.54		.53		.56	
4. Estoy contrariado					-.47			.54				
13. Estoy desasossegado				.43				.46				.41

¹The items are rank-ordered on the basis of the descending magnitude of their dominant salient ($> 0 = .40$) loadings for total sample

For the Trait scale total sample, a main factor is obtained that explains 33.34%. The items, "Pierdo oportunidades por no decidirme pronto", "Me canso rápidamente", "Me siento descansado", "Evito enfrenarme a las crisis o dificultades", "Soy una persona tranquila, serena y sosegada", "Suelo tomar las cosas demasiado seriamente", have a smaller saturation than .40. After the oblique rotation (Promax), two factors are obtained, the first one constituted by items of anxiety absence, excepting "Soy una persona tranquila, serena y sosegada", and the second one by the items of anxiety presence, excepting "Me canso rápidamente", "Suelo tomar las cosas demasiado seriamente", "Me falta confianza en mí mismo", "Evito enfrenarme a las crisis o dificultades".

In the State scale, after the factorial analysis for main axis, it is observed that the main factor explains a 33.34% of the variance, in which load most of the items, excepting "Me siento descansado", "Evito enfrenarme a las crisis o dificultades", "Soy una persona tranquila, serena y sosegada" y "Suelo tomar las cosas demasiado seriamente". After the forced analysis two factors emerged. The first one is

constituted by absence of anxious symptoms that explains 27.52% of the variance. The second factor explains 5.81% of the variance and is conformed by items of presence of anxious symptoms excepting the articles "Evito enfrenarme a las crisis o dificultades" y "Suelo tomar las cosas demasiado seriamente".

In the table 4, factorial analysis is presented for adults and adolescents by separated main axis and Promax rotation. In STAI Trait for the adolescents, after the factorial analysis for main axis, is observed a main factor that explains 38.20% of the variance, in which load most of the factors, excepting the item "Me canso rápidamente", "Me siento descansado", "Evito enfrenarme a las crisis o dificultades", "Soy una persona tranquila, serena y sosegada", "Suelo tomar las cosas demasiado seriamente", which present a smaller saturation than .40. After forcing the analysis two factors arise, conformed the first of them, by the absence of anxious symptoms items, explaining a 22.45% of the variance and the second by items of presence anxious symptoms explains 7.25% of the variance.

For adults the factorial analysis for main axis, is observed that the main factor explains 34.43% of the variance, in which load most of the factors, excepting the item “Evito enfrenarme a las crisis o dificultades”, “Soy una persona tranquila, serena y sosegada”, “Suelo tomar las cosas demasiado seriamente” with inferior loads at .40. In the forced analysis two factors, arise, the first one with items of absence of anxious symptoms, with 28.82% of the explained variance and second one by items of presence of anxious symptoms, except “Suelo tomar las cosas demasiado seriamente”, explaining 5.61% of the variance.

Percentiles

It was done a t-test of sex and age differences, previous to estimate the percentiles in the studied sample, so that in the case there exist differences, to calculate the percentiles according to groups of sex and/or age. These results are presented in the table 5.

For the sex variable, significant differences did not appear ($p = .275$) for the State scale, but there were found differences for the Trait scale. Regarding the age, there exist significant differences for the State and Trait scales, ($p < .000$) among the adults and adolescent groups.

Table 5: t-test analysis on gender differences, for STAI

	Female	Male	t	p
STAI-S	19.41	18.77	-1.092	.275
STAI-R	23.43	22.18	-2.340	.019

The Table 6 presents the percentiles of the total sample, for both STAI scales. The scores that here appear are a point of reference for the age range from 13 to 60 years. The table 7 shows the distribution of the Trait and State scores obtained by women and men of the total sample. There are not found significant sex differences. The table 9 shows the percentiles for the established age levels (13 - 18 years and 19 -60 years), there exists significant age ranges differences. T test show that the adolescents obtain higher scores than the defined adult population (Table 8).

Table 6: normative data for total sample, for STAI

Total sample		
Percentil	STAI-S	STAI-R
10	6	9
20	9	14
30	12	17
40	15	20
50	17	23
60	21	25
70	25	28
80	29	32
90	34	36

Table 7: normative data for female and male, for total sample, for STAI

STAI-S			STAI-R	
Percentil	Female	Male	Female	Male
10	6	6	10	9
20	9	9	14	13
30	12	12	18	16
40	15	14	20	19
50	18	17	23	22
60	22	20	26	24
70	25	24	29	27
80	29	29	32	31
90	34	34	37	36

Table 8: t-test analysis on age differences, for STAI

	Adolescents	Adults	t	p
STAI-S	22.10	17.78	6.884	.000
STAI-R	25.88	21.43	7.744	.000

Table 9: normative data for adolescents and adults, for STAI

Percentil	STAI-S		STAI-R	
	Adolescents	Adults	Adolescents	Adults
10	8	5	13	8
20	12	8	18	12
30	15	11	21	15
40	18	13	24	18
50	22	16	27	
60	25	19	29	24
70	28	23	31	27
80	31	28	34	30
90	36	33	37	35

Discussion

This study present the preliminar analysis and normative data of the State Trait Anxiety Inventory (Spielberger, Gorsuch & Lushene, 1970) in adolescent and adults of the city of Santiago from Chile.

With regard of the reability, both subscales have demonstrated an adecuated internal consistency for the total sample and for each one by separated. Since the internal consistency is an index of the subject response stability throughout the length of the test, it is possible that the values reflect a more homogenous content (Spielberger, *et al.*, 2002a,b).

Regarding a preliminary item analysis, in general, all of them presents appropriate indexes of homogeneity, with item-total correlations superior to .30, for both scales. However, it is necessary to point out the properties obtained by the item "Suelo tomar las cosas demasiado seriamente" that in both samples, obtained a low total item correlation, besides not presenting relevant saturations in the factorial analysis for any sample.

Respect the media punctuations, it highlights the significantly higher scores observed for the adolescents than for adults. Regarding this, a study of Twenge (2000) based on investigations of anxiety in students, showed that between 1952 and 1993 scores of different anxiety evaluations increased. Particularly in Chile, studies with the Inventory of Anxiety of Beck (BAI27) in adolescent school population, show clearly that the prevalence of anxiety in chilean youths is higher than in studies carried out in similar samples in other countries. Situation tha motivates to understand the causes and implications of these high levels of emotional uneasiness in our adolescents (Covas, Melipillan, & Valdivia, 2007). Maybe it can be explained by levels associated to social anxiety, dysfunction that international studies show have a significant relevance in this stage of the life and that recently the same prevalence level has been confirmed in

Chilean adolescents (Vera-Villarroel, Olivares-Rodríguez, Kuhne, Alcázar, Santibáñez, López-Pina, 2007).

In factorial analysis main axis it is observed a unique factor for most of the itemes, those that don't make it, do not present relevant loads in the second factor either. The forced analysis replies the structure of presence-absence items of anxiety, nevertheless not all the item possesses important loads. Considering this with the item-total correlation, it suggests that is necessary detailed analysis of the items of the instrument in Chilean sample.

Norms are presented to facilitate the interpretation of samples of similar characteristic, separating them by sex and age group, what can contribute, for example, in investigations that analyzes the anxiety and other emotional dysfunctions as the depression, given to the high indexes of it in Chile (Vicente, Rioseco, Saldivia, Kohn, Torres, 2002), and due to the current discussion of the overlapping between both constructs (Spielberger, Carretero-Dios, De los Santos-Roig, Buela-Casal, 2002ab).

Finally it is suggested further studies in clinical population, to verify the concurrent properties of this scale with clinical diagnosis.

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