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Argentinean Adaptation of the Social Skills Inventory IHS-Del-Prette

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We present the results of the adaptation of the IHS-Del-Prette (Inventario de Habilidades Sociales, in English, Social Skills Inventory) to a sample of Argentinean college students. Firstly, we addressed the backward translation and carried out an equivalence study of the Portuguese and Spanish versions of the scale. The results showed the two versions were equivalent, as we obtained correlations lower than .50 in only 5 items. Secondly, we performed item analysis by calculating discrimination indexes and item-total correlations. Results indicated that the items are sensitive to differentiate between high and low social-skill groups. Exploratory factor analysis carried out with a sample of 602 college students yielded five factors that explained 26.5% of the total variance, although our data did not completely match the original factor structure. We also obtained moderate alpha values for the subscales, but high reliability for the total scale. Lastly, group differences between males and females are presented to provide evidence of validity. We discuss the implications of the results and present future lines of inquiry.
Keywords: social skills, IHS inventory, adaptation-college students.

Se presentan los resultados de la adaptación del IHS-Del-Prette (Inventario de Habilidades Sociales) en una muestra de universitarios argentinos. Primero, se hizo una traducción inversa y se llevó a cabo un estudio de equivalencia de las versiones portuguesa y española de la escala. Los resultados mostraron que las dos versiones eran equivalentes, ya que se obrtuvieron correlaciones menores de 0.50 únicamente en 5 ítems. Después se analizaron los ítems mediante el cálculo de índices de discriminación y correlaciones ítem-total. Los resultados indicaron que los ítems son sensibles para discriminar entre grupos de altas y bajas habilidades sociales. Análisis factorial exploratorio llevado a cabo con una muestra de 602 universitarios produjo cinco factores que explicaban 26.5% de la varianza total, aunque nuestros datos no se ajustaban totalmente a la estructura factorial original. También se obtuvieron valores alfa moderados para las subescalas, pero una alta fiabilidad para la escala total. Finalmente, las diferencias grupales entre hombres y mujeres se presentan para contribuir evidencia de la validez. Las implicaciones de los resultados se comentan y se presentan futuras líneas de investigación.
Palabras clave: habilidades sociales, inventario IHS, adaptación-universitarios.

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The study of psychological variables related to functional social interaction is currently a field of special interest in psychology. Many investigations have revealed the importance of good interpersonal adjustment to prevent diverse disorders and achieve adequate psychological well-being (Bermúdez, Álvarez & Sánchez, 2003; Brackett, Rivers, Shiffman, Lerner, & Salovey, 2006). The relevance of these behaviors is reflected in the high prevalence of deficits in social functioning of pathologies such as depression, anxiety, various types of addiction, sexual disorders, personality disorders, delinquency and aggressiveness, couple and family problems (Argyle, Bryant, & Trower, 1974; Caballo, 1993, 2000; Parault, Davis, & Pellegrini, 2007; Penn, Kohlmaier, & Corrigan, 2000; Segrin, 1990; Segrin & Flora, 1998; Troisi, Spalleta, & Pasini, 1998; Viscarro, 1994).

In studies carried out with adolescents, an association between deficits in social competence and problems such as academic failure (Heather & Betz, 2000), attention deficit disorder (Canu & Carlson, 2003), and depression (Gable & Shean, 2000) have been reported. Moreover, adequate social adjustment has been observed to operate as a protector factor for some pathologies and psychosocial problems that are typical of this developmental stage. For instance, Jensen-Campbell, Adams, Perry, Workman, Furdella, y Egan (2002) found that adolescents who were socially competent tend to be less vulnerable to peer victimization.

In the field of interracial relations, Devine, Evett, and Vasquez-Suson (1996) found that adolescents who have deficits in social skills also have trouble relating to persons of other ethnic groups and they experience a lot of social anxiety in these encounters.

There are currently various theoretical approaches (Del Prette, A. & Del Prette, Z.A.P., 2009) aimed at investigation and intervention in interpersonal behavior that use a diversified terminology to refer to the characteristics of adequate interpersonal performance.

From the viewpoint of the attribute model (Fernández Ballesteros, 2000), people's behavior, and hence, their social skills, can be explained as a function of certain traits that are shared by people from different cultures and that are stable forms of behavior regardless of the specific situational demand. Thus, psychometric tradition refers to the existence of five big essential factors. In this theoretical model (Big Five Factor Model, Costa & Mc Crae, 1992), people's tendency to sociability and their ease to behave effectively in social settings is related to satisfactory development of traits such as extraversion and agreeableness.

A person's effective social functioning is also explained by certain basic capacities to perceive, use, understand, and deal with one's own and others' emotions, included in the general concept of emotional intelligence (EI). The study of EI has been addressed from two conceptual models, the skill model (Mayer, Salovey, & Caruso, 2000) and the mixed model (Goleman, 1998). Although these approaches are different in the constructs they include within the general concept of EI, they both coincide in considering this set of skills as stable attributes that are present in all individuals.

Social skills, on the other hand, are defined from a cognitive-behavioral model, in which the explanation of human behavior is based on the analysis of the behavior, the environment in which it takes place, personal variables (cognitions, beliefs, etc.), and their interaction. These behaviors allow one to express attitudes, desires, opinions, or rights that are appropriate to the situation, respecting the expression of these behaviors in others (Caballo, 2000). In functional terms, social skills are the social behaviors that lead to the achievement of social competence (Del Prette & Del Prette, 2007, 2008, 2009).

Diverse investigations have revealed the situational specificity of social skills and of social behavior in general (Parault et al., 2007), so that social skills are understood as behaviors whose main characteristic is situational-cultural specificity, and a correct assessment of this construct should contemplate these dimensions. In effect, this situational-cultural characteristic contributes to the conceptual differentiation of the concepts of social skills and emotional intelligence.

In this work, social skills are understood as a descriptive construct that is differentiated from social competence, a concept related to the functionality of social behavior. As noted by Del Prette and Del Prette (2007), social skills comprise the repertory of behaviors that allow a person to perform functionally in a social setting, and the aspects of content and form (topography) are emphasized in their definition. Social competence, in contrast, is defined as the capacity to organize thought, feelings, and action as a function of personal goals and the situational demands, generating positive consequences for oneself and the relation with others (Del Prette & Del Prette, 2008). Moreover, social competence implies implementing not only social skills but also cognitive skills (Gettinger, 2003) such as appropriate perception and effective management of emotions (Vertue, 2003).

The complexity of interpersonal demands in work settings requires perfecting these competences. However, Del Prette and Del Prette (2003) note that, in general, the importance of social skills for adequate professional performance has been underestimated in comparison to technical knowledge.

Del Prette, Del Prette, and Barreto (1999) underscore the importance of the assessment of social competence in the population of psychology students, as they constitute an emerging professional class whose actions rely on social interaction. Given the interpersonal nature of the actions and the object of study of this discipline, students' interpersonal difficulties are even more critical.

In investigations carried out with psychology students (Del Prette, Del Prette, & Castelo Branco, 1992), generalized difficulties to cope with interpersonal situations when they begin to develop the career practicum have been detected, which reveals the importance of the assessment of this construct in the university population.

Inventories are one of the most frequently used assessment instruments to evaluate social skills and, as in other areas of psychology, self-reports are one of the most widely used modalities (67% of the instrumental publications in psychology refer to this modality; see Clark & Watson, 2003). These instruments have important advantages because they are easy to apply, they can be used with large samples, they tap a large number of situations and behaviors, they are cheap, and they reliably assess thoughts and feelings in social situations (Caballo, Del Prette, Monjas, & Carrillo, 2006; Del Prette, Z.A. & Del Prette, A., 2009).

In Latin America, interest has increased in the elaboration and adaptation of instruments to assess social skills in order to identify deficits in the population of university students (Bandeira & Quaglia, 2005; Del Prette & Del Prette, 2001, 2003; Del Prette, Del Prette & Barreto, 1998,). However, despite the scientific and practical relevance of the assessment of social skills in university students, in our country, no instruments that assess this construct in this population have been found.

Therefore, the general purpose of this work is to adapt the Social Skills Inventory (Del Prette & Del Prette, 2001), performing the studies recommended by the international psychometric norms (American Educational Research Association, American Psychological Association & National Council on Measurement in Education, 1999). Although the work involved in the adaptation of foreign instruments to the local environment often justifies the elaboration of completely new instruments, the main interest in adapting this inventory lies in the possibility of generalizing the psychometric properties of the instrument to other cultural contexts (by means of meta-analytic studies, for example), which would also permit cross-cultural studies. In fact, the results of previous studies (Feng & Cartledge, 1995; Gallois, 1993) reveal the importance of cultural differences in social skills and the relevance of comparative investigation of social skills in different cultures by means of a detailed analysis of the critical aspects related to these differences.

Method

Participants

Participants were university students from the Universidad Empresarial Siglo 21 (UE Siglo 21), the Universidad Nacional de Córdoba, the Universidad Nacional de Río Cuarto, the Universidad Católica de Córdoba, the Universidad Tecnológica Nacional, and the Universidad Blas Pascal, with representative proportions of students at different moments of the courses and of both sexes. Students from more than 42 careers of diverse areas (Technology, Natural Sciences, Social Sciences, and Arts and Humanities) were included. The sample was selected accidentally and included participants of ages between 17 and 25 years. In each specific psychometric study, the number of participants, the mean age, and percentage according to sex are mentioned.

Instruments

"Inventario de Habilidades Sociales" (IHS-Del-Prette, translated: Social Skills Inventory*):* This is a self-report instrument to assess social skills. It is made up of 38 items, each one describing an interpersonal situation and a possible reaction to it. In order to take into account a variety of interlocutors, contexts, and interpersonal demands, the items were elaborated from the analysis of the literature about situations and demands included in the concept of social skills, as well as based on previous studies with university students (Del Prette & Del Prette, 2001). In each item, participants rate the frequency with which they behave as described in the item, on a 5-point Likert-type scale, ranging from 0 (*never or rarely*) to 4 (*always or almost always*). For example, Item 1 ("I feel comfortable in a group of strangers, talking naturally"), respondents state the frequency with which they act that way. If the participants had not actually experienced any of the situations, they should guess how they would act in that situation. Some of the items of the inventory are inversely worded so that a high frequency in these items indicates social skill deficit. In these items, the scores are reversed to calculate the total score. For instance, in Item 9 ("I avoid talking in public or making speeches in front of strangers"), a high frequency of this behavior indicates a deficit in social skills. For the final score the higher the frequency, the larger the social skills repertory.

The psychometric studies carried out in Brazil show the usefulness and appropriateness of the IHS-Del Prette as a self-report instrument to measure social skills. In studies carried out to provide evidence of the internal structure of the scale using exploratory factor analysis, a five-factor structure was found that explained 92.75% of the total variance (Del Prette, et al., 1998). In Table 1 are presented the factors of the inventory with the indicators of internal consistency (alpha coefficients).

As can be seen, the inventory presents adequate internal consistency in the complete scale and in each one of the factors.

Studies were also carried out to examine the sensitivity of the inventory to distinguish changes in the social skills

Table 1
Original Factors of the IHS-Del Prette and Alpha Coefficients

Factors	α
Self-affirmation and Coping with risk	0.96
Self-affirmation in the expression of positive feelings	0.86
Conversation and social ease	0.81
Self-exposure to strangers and new situations	0.75
Self-control of aggressiveness	0.74
Total scale	0.75

repertory after an intervention (social skills training). Significant differences were observed between the scores obtained by the experimental group at pre- and posttest, whereas these differences were not observed in the control group (Del Prette et al., 1999).

Lastly, evidence was provided of the convergence with the Rathus Assertiveness Scale (r = .81, p = 0.001) and studies were carried out of the temporal stability using the test-retest method (r = 0.90, p = .001) (Bandeira, Neves Costa, Del Prette, Del Prette, & Gerk Carneiro, 2000). Taken concurrently, according to the results obtained, the original version of the IHS-Del Prette is a valid and reliable instrument.

Procedure

Four studies were performed to adapt the inventory. The first one consisted of the backward translation of the instrument, in which the test was translated from Portuguese to Spanish by three official translators and, subsequently, another specialist in Portuguese translated each version from Spanish back to Portuguese. This translation was compared with the original version and the necessary adjustments were made.

Subsequently, both the Portuguese and the Spanish version of the inventory were administered to a bilingual sample of 82 students (54.88% female, 45.12% male, mean age 22 years) from the UE Siglo 21, who were in the first four years of various university careers. The original Portuguese version of the test was administered and, one week later, the Spanish version. The scores obtained in the items of both versions of the inventory were related using Pearson's correlation coefficient to estimate the semantic equivalence of both versions. Lastly, the items of the Spanish version were analyzed and discrimination and item-total correlation indexes were calculated.

In a second study, exploratory factor analysis of the items was carried out. The IHS-Del-Prette was administered to a sample of 602 university students (46.01% female, 53.99% male), age range 17 to 25 years (mean age 21.15), who were in the first four years of various university careers. Subsequently, Cronbach alpha coefficients for each factor and for the total scale were calculated.

Lastly, a study of contrasted groups was carried out to provide evidence of the validity of the test with other variables. A difference of means t-test was calculated for independent groups according to sex. All the studies were carried out using the statistical package SPSS 15.0 for data analysis.

The IHS-Del-Prette was administered after obtaining respondents' consent, and in all cases they were informed about the purpose of the investigation. They were also assured that their anonymity was guaranteed and that their responses were confidential.

Results

Study 1: Backward Translation of the IHS-Del-Prette, Studies of Semantic Equivalence and Item Analysis

The comparative study of the original version and the translated one of the IHS-Del-Prette showed that both instruments can be considered equivalent insofar as item content is concerned (r = .80, p < 0.01). However, we thought it appropriate to estimate the correlation between each one of the items. As a criterion to calculate the effect size of the correlations, we used Cohen's (1977, cited by Aron & Aron, 1999) rule, which considers coefficients higher than or near 0.50 adequate.

Five of the items (14, 23, 24, 31, and 38) presented correlations lower than 0.50, so we could conclude that only a few items contained idiomatic expressions that were difficult for the bilingual sample to understand. Nevertheless, taking into account that this analysis only allows us to estimate the semantic equivalence of both versions, the items were retained in the remaining studies and those with difficult expressions in Spanish were reformulated.

Firstly, we assessed the pattern of missing values to determine whether it was randomly distributed and to assess the percentage of these values in each item by means of specific SPSS 15.0 routines (missing values analysis). The cases with missing values were eliminated because they followed a random pattern and did not exceed 5% (Tabachnick & Fidell, 2001).

Subsequently, we identified the atypical univariate cases by calculating standard z scores for each one of the 38 items. Cases with z scores higher than 3.29 (two-tailed, p < 0.001) and cases that were thus identified in the box plots were considered atypical. Before discarding them, we carried out Mahalanobis' distance test at p < 0.001 to examine the atypical multivariate cases. As atypical cases can have unsuitable influence on the Cronbach alpha coefficient and can affect the studies of internal structure of an instrument (Liu & Zumbo, 2007), we decided to discard 104 cases that presented atypical scores, so that the final sample comprised 498 cases.

To verify the assumptions of normality, we carried out skewness and kurtosis analysis for each item plus graphic inspection of the distribution of the scores (histograms with normal curve). The items presented kurtosis and skewness indexes between +1.00 and -1.00, which is considered as excellent in the literature, except for 5 items that presented skewness values higher than 1.00 (Items 3, 8, 15, 28, and 33), and 6 items that also presented kurtosis indexes higher than 1.00 (Items 5, 9, 14, 20, 28, and 33). Nevertheless, the values observed were lower than 1.60, which is considered adequate (George & Mallery, 2001), except for one item (Item 28), which had a high kurtosis value (over 1.90).

In order to replicate the studies carried out with the original version of the scale, we calculated discrimination indexes

to determine the sensitivity of the items to discriminate groups of high and low social skills. This index was based on the difference between the percentages of selection of the values 3 and 4 in each item, for the groups of lower and higher scores in the scale (Group 1 = 25.1%, Group 2 = 23.1%, respectively). Secondly, we calculated the item-total correlations. The results can be seen in Table 2.

Lastly, we calculated difference of means tests for independent groups in each one of the items. All the differences between the groups were significant at the $p <$ 0.05 level, except for Item 18. This item presented the lowest discrimination index in the first analysis. Nevertheless, the item was not discarded because we decided to contrast the indexes obtained with the results of factor analysis.

The discrimination indexes of all the items yielded differences in favor of the high scoring group (Group 2), which shows that the items were sensitive to differentiate between high and low social skill groups. A total of 31 items presented values near or higher than the criterion followed by the authors of the original scale (higher than 10%). The information contributed by the item-total correlation was similar, taking into account that the items with higher discrimination index values had the highest correlations.

Table 2
Discrimination Indexes and Item-Total Correlation of the IHS-Del-Prette Scale

Item	Discrimination Index	Item-Total Correlation
1	12.4	0.45
2	10.2	0.27
3	4.8	0.22
4	9.0	0.24
5	5.4	0.11
6	10.2	0.29
7	9.6	0.41
8	9.8	0.39
9	13.9	0.37
10	7.4	0.18
11	11.6	0.42
12	11.0	0.37
13	7.4	0.31
14	9.0	0.24
15	7.2	0.26
16	12.9	0.33
17	8.0	0.26
18	1.8	–0.03
19	14.1	0.44
20	8.6	0.23
21	8.6	0.32
22	3.0	0.03
23	10.4	0.31
24	8.8	0.24
25	8.8	0.22
26	8.4	0.21
27	10.6	0.29
28	5.8	0.36
29	13.9	0.47
30	10.6	0.31
31	10.0	0.33
32	9.4	0.27
33	3.8	0.09
34	4.6	0.01
35	11.2	0.20
36	13.1	0.38
37	8.2	0.33
38	7.6	0.21

Study 2: Evidence of Internal Structure. Factor Analysis

Before the analysis, we carried out a diagnosis of multicolinearity among the items in order to verify the existence of highly correlated or redundant variables (correlations near 0.90). The tolerance and condition indexes for each one of the items were analyzed. The tolerance indexes were high in all the items (over 0.60), and the condition indexes for each component were lower than 30. In the cases in which the condition indexes were higher than this value (two components), the components did not contribute substantially to the variance accounted for in more than one variable (variance higher than 0.50). Taken concurrently, the results observed show the absence of multicolinearity among the items (according to the criteria proposed by Belsely, Kuh & Welsch, 1980, cited in Tabachnick & Fidell, 2001).

The 38 items of the scale were initially factor-analyzed using the principal component extraction method to determine the number of factors. The Kaiser-Meyer-Olkin index of sample adequacy (KMO) had a value of 0.79, and Bartlett's sphericity test was significant at the $p < 0.001$ level, which indicates that it was feasible to perform factor analysis.

With regard to factor extraction, we used the Kaiser-Guttmann rule and obtained 12 initial factors with Eigenvalues higher than 1, which explained 55% of the total variance of the test. Taking into consideration that this rule tends to extract too many factors, we used as additional criteria the interpretation of the scree test (Cattell, 1966), and the results of Horn's parallel analysis (HPA; Horn, 1965). Velicer (1976, cited in Danielson & Roecker Phelps, 2003) suggests applying the HPA to five random bases, so the analysis was carried out this way and in all of them, there was a maximum of eight factors. These results coincided with those observed in the scree sedimentation chart, because the cutoff point in the descending tendency is seen in the eighth factor (Figure 1).

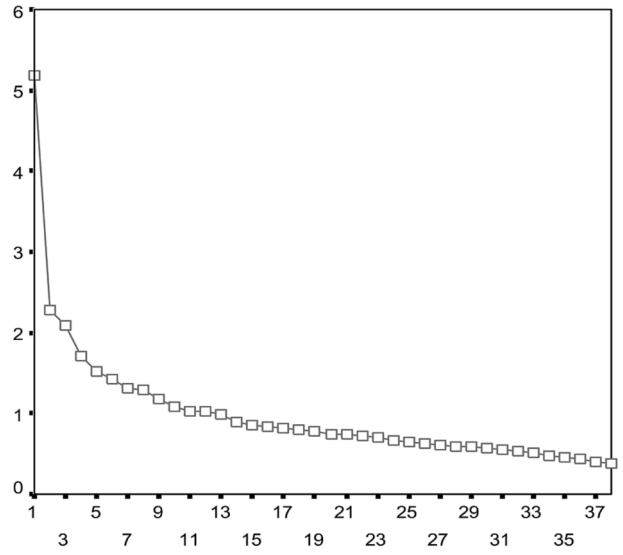

Figure 1. Sedimentation Scree test of thefactors to be extracted.

Table 3
Configuration Matrix of the Factor Loadings of the 26 Final Items

Item	Factor				
	1	2	3	4	5
24	0.540				
17	0.509				
8	0.503				
37	0.486				
2	0.472				
13	0.429				
23	0.419				
12		0.644			
7		0.629			
19		0.454			
1		0.441			
36		0.432			
20		0.431			
28			0.584		
6			0.545		
10			0.507		
35			0.467		
30			0.429		
27				0.497	
21				0.474	
4				0.468	
5				0.403	
14					0.569
9					0.541
11					0.492
29					0.464

On the basis of these results, we factor-analyzed the data with the principal axis extraction method, as the literature suggests this method when the assumption of normality is not met (Fabrigar, Wegener, MacCallum, & Strahan, 1999).

The diverse solutions were rotated using oblique rotation (promax). From the examination of the configuration matrix, we eliminated the items with inadequate factor loadings (less than .40), items with loadings higher than .30 in more than one factor, items with low communality, and items that did not correlate with any factor. Consequently, we retained a total of 26 final items distributed in five theoretically clear factors that explained 29.15 % of the common variance of the responses to the test (Table 3).

The items retained on the basis of the results of the factor analysis, the corresponding factors, and their interpretations are presented in Table 4. As can be seen, the results show content correspondence in four of the five factors obtained in the original instrument. In addition, the factors are congruent with the typology proposed by Kelly (1982) and they coincide with the structure obtained in the Social Self-efficacy Scale for University Students (EAS-U, Olaz, Pérez, & Stefani, 2008).

Study 3: Analysis of Internal Consistency

Once the internal structure of the scale had been determined, we estimated the internal consistency of the subscales and of the total scale. All the values were low except for those obtained in Factor 2 and for the total scale, which were satisfactory. However, as stated by Cortina (1993), when there are many items (more than 30), the alpha coefficient may increase artificially. Therefore, in these cases, it is recommended to use the mean of the inter-item correlations, which is less affected by the number of items in the scale (Carretero-Dios & Pérez, 2005). Taking this into account, we calculated this coefficient for each subscale and also for the total scale. The results can be seen in Table 5.

When the mean correlation between the items and the scores of the total scale is positive, it indicates that the items are part of the same construct, and when this mean is lower than the mean of each factor, it indicates that the trait is made up of different dimensions (according to Carretero-Dios & Pérez, 2005). As can be observed, the mean correlation between the items and the scores of the total scale is positive, the mean item-total correlations for each factor are adequate (within the range of .15 to .50) and lower than the mean correlation between the items and the scores of the total scale. However, in all cases, the correlations are relatively low.

Study 4: Evidence from Contrasted Groups

The theory of the domain assessed postulates the existence of differences between groups of the population,

Table 4
Retained IHS Items after Factor Analysis and the Factor to which they belong

Factor	Item
1. Conversation and social else Skills to initiate, keep up, and end conversations with others and to act appropriately in verbal interactions, without feeling too much anxiety. Corresponds to Factor 3 of the original scale (Del Prette & Del Prette, 2001).	• I have trouble interrupting a phone conversation even with people I know. • In conversations with friends, I have trouble ending a conversation and prefer to wait until others do so. • I have trouble joining a conversation, even with school or work mates. • If I have to ask a companion for a favor, I end up not doing it. • When a relative (parents, older siblings, partner) insists on telling me what I should or should not do, contradicting what I think, I end up giving in to avoid problems. • If someone at work or at school praises me, I feel embarrassed and don't know what to do or say. • I avoid asking strangers anything.
2. Self-exposure to strangers and new situations Skills to approach strangers who are either somewhat important or attractive to the subject. Corresponds to Factor 4 of the original scale (Del Prette & Del Prette, 2001).	• If I find a person sexually interesting, I can approach him/her to strike up a conversation. • If I feel like meeting someone to whom I have not been introduced, I introduce myself. • Even if I am close to an important person whom I would like to meet, I have trouble approaching him/her and starting a conversation. • I feel comfortable in a group of strangers, talking naturally. • When I'm with a person I just met, I have trouble chatting about interesting things. • If I like the person I'm going out with, I take the initiative to express my feelings.
3. Empathic skills and expression of positive feelings Skills to convey warmth and express compliments, praise, appreciation, personal feelings and opinions to others when their positive behavior justifies doing so. The capacity to put oneself in the others' place and to defend others' rights is also included. Corresponds to Factor 2 of the original scale (Del Prette & Del Prette, 2001), called Self-affirmation in the Expression of Positive Feelings.	• When one of my relatives (children, parents, siblings, or couple) achieves something important that took a lot of effort, I praise them for their success. • When someone does a good deed, even if it is not aimed at me directly, I mention it and praise them as soon as I get a chance. • At home, I express my affection to my relatives with words and gestures. • If I feel good (happy), I express it to the members of my gang of friends. • When someone is treated unjustly within a group setting, I step up to defend them.
4. Coping with risk Capacity to oppose or reject unacceptable behavior or comments from an adversary, as well as to achieve more acceptable behavior in the future (assertiveness). Corresponds to Factor 1 of the original scale (Del Prette & Del Prette, 2001), called Self-Affirmation and Coping with Risk.	• If a friend takes advantage of my good will, I express my annoyance directly. • If I receive defective merchandise, I address the business where I bought it and demand for it to be replaced. • If someone interrupts me when I'm talking, I ask him/her to wait until I finish what I was saying. • When I friend owes me money and forgets to return it, I find a way to remind him/her.
5. Social academic and work skills Interpersonal skills that are necessary for adequate academic and work performance This factor is not present in the original structure of the scale.	• I talk in public (for example, a conference) in the classroom or at work if I am requested to. • I avoid talking in public or making speeches in front of strangers. • If a teacher or director makes an incorrect statement in a class or meeting, I offer my point of view. • At school or at work, if I do not understand an explanation about an interesting topic, I ask all the questions I need to in order to clarify it.

Table 5
Cronbach's Alpha Coefficients for each one of the IHS-Del-Prette Factors

SCALES	α	Mean inter-item correlation
Conversation and social performance	0.66	0.21
Self-exposure to strangers and new situations	0.70	0.29
Empathic skills and expression of positive feelings	0.60	0.24
Coping with risk	0.52	0.21
Social academic and work	0.64	0.31
Total scale	0.79	0.13

Table 6
Means, Standard Deviations, t-value, Significance, and Effect Sizes for each one of the Social Skills Scale as a function of Sex

Dimension	Sex					
	Male[a]		Female[b]			
	M	*DS*	*M*	*DS*	*t*	*d*
Factor 1	19.96	4.10	20.33	4.15	–0.98	–0.09
Factor 2	10.65	3.77	9.40	3.81	3.66**	0.33
Factor 3	13.40	2.98	14.90	3.21	–5.39**	–0.50
Factor 4	9.53	2.99	8.88	3.00	2.45*	0.22
Factor 5	8.86	3.36	8.58	3.45	0.90	0.08
Scale	64.97	11.36	63.89	11.90	1.043	0.10

so evidence of the validity of the test can be provided by comparing the scores obtained by these groups in the instrument to be validated (Thorndike, 1982). Therefore, we performed a study to provide this kind of evidence, comparing the scores of males and females in each one of the scales of the IHS-Del-Prette by means of a differences of means *t*-test for independent groups ($N = 498$, 263 males [52.82%]; 235 females [47.18%]). The results can be seen in Table 6.

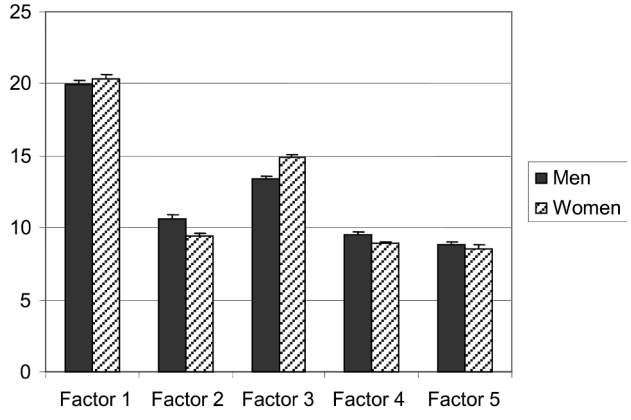

Figure 2. Differences of means as a function of sex in the Social Skills Scales.
The lines over each bar represent standard errors of measurement.

The results show that the males obtained higher scores in the Self-exposure to Strangers and to New Situations Scale ($p < 0.001$) and in the Coping with Risk Scale ($p < 0.05$). In contrast, the females obtained higher scores in the Empathetic Skills and Expression of Positive Feelings Scale ($p < 0.001$). The differences of means of both sexes can be seen in Figure 2.

Discussion

The general purpose of this work was to adapt the IHS-Del-Prette inventory of social skills, originally created to assess the interpersonal repertory of Brazilian university students (Del Prette et al., 1998). For this purpose, four psychometric studies were carried out.

The study of the backward translation and equivalence of the original and the translated version leads us to conclude that both instruments can be considered equivalent. Nevertheless, we observe five items (14, 23, 24, 31, and 38) that present correlations lower than .50, but that correlate with the factors obtained through factor analysis. It can be inferred that the content of these items presents specific idiomatic expressions that probably acted as a source of bias when the bilingual respondents completed the inventory. The literature related to the area of social skills notes that the use of a test in a different cultural context from the one for which it was created generates several difficulties

that can become sources of error and decrease the equivalence indexes (Tornimbeni, Pérez, & Olaz, 2008).

In the analysis of the items, we observed that they were sensitive to differentiate between high and low social skill groups, except for a single item. This item was eliminated because it did not correlate with any of the factors obtained. It is noteworthy that only two of the items with adequate discrimination indexes were discarded from the final factor solution.

In addition, the studies of validity of contrasted groups were congruent with our theoretical expectations. The differences in social skills between men and women occur since childhood; however these differences are not general, but instead are observed in specific dimensions. Caballo (1993) cites several studies (Furnham & Henderson, 1981; Bryant & Tower, 1976; Baron & Kenny, 1986, cited in Caballo, 1993) that reveal that women have higher social skills in the expression of positive feelings, and men in the expression of negative feelings and in skills to cope with new situations, which was also verified in studies carried out in Brazil (Del Prette & Del Prette, 2001).

The study of the internal structure revealed five factors made up of one-dimensional items (Conversation and Social Performance, Empathic Skills and Expression of Positive Feelings, Self-exposure to Strangers and New Situations, Coping with Risk, and Academic and Work Social Skills). The behavioral-situational characterization of the factors obtained in the IHS-Del-Prette allows the representation of the multidimensionality of the construct of social skills, which does occur with many of the inventories of this field.

However, the explanatory capacity of the structure obtained is moderate (26.5%), which could be due to various causes. Firstly, we observed a low correlation among the items and high tolerance coefficients, which could indicate a low multiple correlation among the items, and this could affect the final solution obtained with factor analysis. These results do not seem to be due to difficulties in the translation of the items because the studies carried out reveal the equivalence of the items. Thereby, the results could be explained by peculiarities in the process of examinees' responding, which could be due to cultural differences from the original sample. Thus, although the items are in general sensitive to identify subjects with high and low development of the construct, they are not very consistent with each other, and the internal structure of the instrument is only stable after a large number of items are eliminated.

Secondly, although the items of the inventory were elaborated from the analysis of the literature on social skills, and based on previous studies with university students (Del Prette et al., 1992), they are not based on a typology that explicitly describes the types of responses or behavioral dimensions of social skills.

As noted by Caballo (2000), Lazarus was one of the first authors to establish, from clinical practice, the main types of response or molar behavioral dimensions comprised in social skills. For this author, there are four social dimensions: the capacity to say no, the capacity to ask for favors and help, the capacity to express positive and negative feelings, to keep up and end a conversation. Nevertheless, this first typology disregards other skills of great importance such as the social academic and heterosocial skills.

The dimensions subsequently proposed from the results of empirical research revolve around this first classification. However, no generalized agreement about the number of factors underlying the construct has been reached and, in general, the proposed theories present typologies that are not very parsimonious, often establishing an excessive number of factors (Caballo, 2000). In this sense, the typology proposed by Kelly (1982) is noteworthy. According to this author, the concept of social skills refers to a universe of behaviors that would include diverse subskills such as conversational skills, heterosocial skills to make dates, work skills, assertive opposition, and assertive acceptance. Thus, the theory allows one to systematize and clearly group the diverse social behaviors parsimoniously and extensively. It is therefore surprising that there are so few empirical studies that tend to validate the assumptions of this theory.

In this sense, we underscore that the results obtained in the adaptation of the IHS-Del Prette corroborate the dimensions proposed by Kelly (1982) and also coincide with the structure obtained by similar instruments elaborated in our settings (EAS-U; Olaz et al., 2008). We can therefore conclude that, although the psychometric properties of the IHS-Del Prette must be improved, this instrument is of great heuristic value because it allows one to carry out studies that tend to use the unifying theory of social skills.

Therefore, we are currently elaborating new items for each one of the dimensions identified in the factor analysis of the instrument, in order to improve its psychometric properties and to obtain a sample of more representative indicators. Once the new version of the instrument is carried out, we plan to perform convergent validity studies between the IHS-Del-Prette and the EAS-U, and confirmatory factor analysis to provide new evidence of the internal structure.

In view of the absence of local instruments to assess social skills and the lack of valid and reliable adaptations, we conclude that the IHS-Del-Prette could be an alternative for the investigation of this construct, although new studies are required to improve its psychometric properties.

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