

Psychometric properties of the AQ Aggression Scale in Chilean students

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Abstract

Background: The Buss and Perry Aggression Questionnaire (AQ) evaluates aggressive behaviours and is used to assess manifestations of aggression. **Methods:** At different points in time, 346 Chilean university students participated in the validation of the instrument, whose convergent validity was shown in relation to the scales of Psychological Aggression and Physical Aggression of the Conflict Tactics Scale 2 (CTS-2), and the Salvo Impulsivity Scale. Discriminant validity was found when comparing the scores obtained from a group of students categorized as "Violent" with those of a control group, after a screening test. **Results:** The AQ scale has appropriate psychometric properties in terms of internal consistency, test-retest reliability, convergent validity and discriminant validity. Four principal factors were obtained in the confirmatory factor analysis. **Conclusions:** The AQ can be used in Chile to assess aggressive behaviours. Challenges for future research are discussed.

Keywords: Aggressive behaviour, Aggression Questionnaire, self-report, validation.

Resumen

Propiedades psicométricas de la Escala de Agresividad AQ en estudiantes chilenos. **Antecedentes:** el Cuestionario de Agresión de Buss y Perry (AQ) evalúa conductas agresivas y se utiliza para medir manifestaciones de agresión. **Método:** trescientos cuarenta y seis estudiantes universitarios chilenos participaron en diferentes momentos de la validación del instrumento, las evidencias de validez convergente se analizaron en relación a las subescalas de Agresión Psicológica y Agresión Física de la Escala de Tácticas de Conflicto 2 y la escala de Impulsividad de Salvo. Las evidencias de validez discriminante se comprobaron en la comparación de las puntuaciones obtenidas en un grupo de estudiantes universitarios identificados como violentos en un screening y el grupo control. **Resultados:** el AQ presenta propiedades psicométricas adecuadas en términos de consistencia interna, estabilidad test-retest y evidencias de validez convergente y discriminante. Se identificaron cuatro factores principales en el análisis factorial confirmatorio. **Conclusiones:** el AQ parece ser un instrumento adecuado para evaluar el nivel de conductas agresivas en muestras chilenas. Se plantean desafíos para estudios posteriores.

Palabras clave: comportamiento agresivo, Cuestionario de Agresión (AQ), autoinformes, validación.

The Buss and Perry Aggression Questionnaire (AQ) (1992) assesses aggression by means of four subscales: physical aggression, verbal aggression, anger and hostility. It is based on the Buss and Durkee Hostility Inventory (1957), which has been validated in different contexts and populations (Buss & Perry, 1992) but it has some substantial shortcomings. Methodologically speaking, the Buss and Durkee Hostility Inventory does not have empirical support for the items assigned to each of the scales, in addition, it cannot evaluate stability over time because it no factor analysis or test-retest study has been carried out. Moreover, the true-false response format is not the most appropriate.

These shortcomings led Buss and Perry (1992) to design a new instrument that would consider the analysis of aggression in terms of factors, but with more modern psychometric standards. As a result, the authors took some items from the 1957 Inventory, but also

rewrote others in order to improve their clarity. Finally, new items were added to the instrument, resulting in a set of 52 statements that were applied to 1,253 university students. A Likert-type response format was used, which ranged from 1 (*extremely uncharacteristic of me*) to 5 (*extremely characteristic of me*), and exploratory factor analysis yielded four factors: Physical Aggression (nine items), Verbal Aggression (five items), Anger (seven items) and Hostility (eight items). The first two factors represent a motor or instrumental component; anger, which implies psychological activation and preparation for aggression, is the emotional or affective component; and hostility represents the cognitive component. Thus, the questionnaire was made up of 29 items, yielding a minimum score of 29 points and a maximum score of 145. The internal consistency coefficients were as follows: Physical Aggression, $\alpha = .85$; Verbal Aggression, $\alpha = .72$; Anger, $\alpha = .83$ and Hostility, $\alpha = .77$, with the internal consistency being $\alpha = .89$. Test-retest reliability (nine weeks) for the subscales and total score ranged from $\alpha = .72$ to $\alpha = .80$ (Buss & Perry, 1992). Sex differences were also observed, where men obtained a significantly higher mean scores than women in Physical Aggression, Verbal Aggression and Hostility, but not in Anger. The most notable difference between males and females was found in Physical Aggression.

To obtain evidence of criterion validity, the authors calculated correlations between the results of the different subscales, the total score and different personality traits. Strong correlations were found in the areas of emotionality, impulsivity, assertiveness and competitiveness. To assess construct validity, the authors asked the opinion of peers about the traits measured by the subscales and examined the correlations of the AQ results. The results were significant.

Later adaptations and revisions

The Buss and Perry (1992) AQ has been validated in different countries. In the Spanish context, Andreu, Peña and Graña (2002) validated the instrument with a sample of 15- to 25-year-olds, and Vigil-Colet, Lorenzo-Seva, Codorniu-Raga and Morales (2005) also validated it with a sample of 237 people, aged 16 to 84. Both confirmed that this instrument is appropriate for measuring physical and verbal aggression, anger and hostility. Similar results were reported by Porras, Salamero and Sender (2001-2002). Also noteworthy is an adaptation of the instrument that was tested on a group of pre-adolescents and adolescents, which confirmed the four-dimensional structure of the questionnaire (Santisteban, Alvarado, & Recio, 2007).

However, in southern Italy, in another validation test of 860 students whose mean age was 20.1 years, a change was found. By means of confirmatory factor analysis, the authors obtained three factors instead of four: the original factors of physical aggression and hostility, and a third factor called “inability to verbalize anger” (Somantico, Osorio, Parello, De Rosa, & Donezzetti, 2008). In China, Maxwell (2007) reported that the four-factor structure (examined through confirmatory factor analysis) proposed by Buss and Perry fails in the Chinese context, even though after analyzing the 12-item brief version, the author found a good fit of the model to the data and adequate internal consistency. The same result was found in another validation in Turkey (Önen, 2009).

Nonetheless, Vigil-Colet et al. (2005) pointed out that the four-factor structure has been reported in various translations of the original scale into Dutch, French, Japanese, Spanish, and Slovakian. However, these same authors propose a briefer version with only 20 items, which has proven a better fit in different cultures.

In Latin America, little research has been performed with the AQ. Among the research that has been done Castrillón, Ortiz and Vieco (2004) reported a five-factor structure in Colombia, whereas Reyna, Lello, Sanchez and Brussino (2011) reported two factors in an exploratory factor study of the AQ in Argentina, later refined in a 2- and 4-factor structure in confirmatory analysis. In this research context and given that the measurement qualities of the AQ with the Chilean population are unknown, the main objective of this work was to study the instrument’s psychometric properties with a sample of Chilean university students. To this end, we analyzed its internal consistency and test-retest reliability and obtained some evidence of validity.

Method

Participants

We used three non-probabilistic samples based on accessibility. Participants were told about the objectives of the research and given an informed consent form. They were also given an e-mail address, which they could use to see their scores.

The first sample consisted of 239 students from eight different majors at the University of San Sebastián in Concepción (USS): 64.4% women (n = 154), 34.7% men (n = 36) and 0.8% (n = 2) who chose not to reveal their sex. The average age of participants was 21.25 years old, with a minimum age of 18 and a maximum age of 35. A set of instruments was administered to participants for criterion validity, and they were told they had to be in a stable, committed relationship in order to participate.

The second sample was made up of 56 psychology students from a different institution, the University of Concepción (UdeC). In this sample, there were 35 women (62.5%) and 21 men (37.5%), with the mean age being 22.1. These students were administered the AQ on two occasions, separated by 80 days.

The third sample consisted of a group of random patients who were seeking primary care for various pathologies in the Student Health Services at the University of Concepción (DISE-UDEC). These patients are participants in a research project called “Genotyping of t102c polymorphism of the 5-HT_{2A} serotonin receptor and its association with aggressive behaviour in young university students”, which is run by Liliana Lamperti and Denisse Pérez of the Biochemistry Department of the same university. The data from this project were used for determining discriminant validity.

These participants responded to a battery of tests, including the AQ and a screening test for violent behaviours. Of the 100 patients, 51 people (19 men and 32 women) from different majors at the university were defined as “violent” according to the screening. The mean age was 22.9 years old.

Instruments

The Aggression Questionnaire (AQ, Buss & Perry 1992). For this study, this instrument (described above) was applied in its Spanish adaptation (Andreu, Peña, & Graña, 2002), which has been revised by three expert judges who modified some items. This made the instrument easier to understand and more appropriate for the Chilean context. The version employed is shown in Table 1.

Psychological Aggression and Physical Aggression Subscales of the Conflict Tactics Scale 2, revised version (CTS-2, Straus, Hamby, Boney-McCoy, & Sugarman, 1996). The first version of this instrument consists of 8 items and refers to verbal and non-verbal acts aimed at denigrating others. The CTS-2 consists of 12 items and refers to the intentional use of physical force to cause harm to one’s partner. There are eight Likert-type response options for these scales, which range from 0 (*this has never happened*) to 7 (*more than 20 times in the last six months*). With regard to internal consistency, the Psychological Aggression subscale obtained $\alpha = .86$ and the Physical Aggression subscale $\alpha = .894$. Adequate criterion validity is also reported.

Impulsivity Scale (Salvo, 2007). This instrument is based on the impulsive behaviours described in the DSM-IV (1997, as cited in Salvo, 2007), is self-administered and consists of seven items: wasteful behaviour, irresponsible driving, substance use, shoplifting, overeating, lack of control over anger, and impulsive suicidal and self-harm behaviours. Response to each item is on a Likert-type scale ranging from 1 to 5, corresponding to: never, almost never, sometimes, many times, and always. In effort to make the application conditions more flexible, the irresponsible driving item was modified and the suicidal behaviour item was excluded, leaving a total of six items for this study. A Cronbach’s alpha coefficient of $\alpha = .61$ was reported in the study done by Salvo (2007).

Table 1
Items of Chilean Form of AQ

	AQ-29 Chilean form items	Brief AQ form items
1	De vez en cuando no puedo controlar el impulso de pegarle a otra persona [Sometimes I can't control the impulse to hit another person]	*
2	Cuando no estoy de acuerdo con mis amigos, discuto abiertamente con ellos [When I don't agree with my friends, I argue openly with them]	*
3	Me enojo rápidamente, pero se me pasa enseguida [I get annoyed quickly, but I it doesn't last long]	*
4	A veces soy bastante envidioso [Sometimes I'm quite jealous]	*
5	Si me provoca lo suficiente, puedo golpear a otra persona [If I'm provoked enough, I may hit another person]	*
6	A menudo no estoy de acuerdo con la gente [I often disagree with people]	*
7	Cuando estoy frustrado, muestro el enojo que tengo [When I'm frustrated, I show my annoyance]	*
8	En ocasiones siento que la vida me ha tratado injustamente [Sometimes I feel that life has treated me unfairly]	*
9	Si alguien me golpea, le respondo golpeándole también [If someone hits me, I hit him back]	*
10	Cuando la gente me molesta, discuto con ellos [When people annoy me, I argue with them]	*
11	A veces me siento tan enojado como si estuviera a punto de estallar [Sometimes I get so annoyed that I feel I'm going to burst]	*
12	Parece que son siempre otros los que consiguen las oportunidades [It always seems to be others who get chances in life]	*
13	Me suelo implicar en peleas algo más de lo normal [I get into fights more often than people normally do]	*
14	Cuando la gente no está de acuerdo conmigo, no puedo evitar discutir con ellos [When people disagree with me, I can't avoid arguing with them]	*
15	Soy una persona apacible [I'm a calm person]	*
16	Me pregunto por qué algunas veces me siento tan resentido por algunas cosas [I wonder why sometimes I feel so bitter about certain things]	*
17	Si tengo que recurrir a la violencia para proteger mis derechos, lo hago [If I have to resort to violence to defend my rights, I do it]	*
18	Mis amigos dicen que discuto mucho [My friends say that I argue a lot]	*
19	Algunos de mis amigos piensan que soy una persona impulsiva [Some of my friends think I'm an impulsive person]	*
20	Sé que mis "amigos" me critican a mis espaldas [I know that my "friends" criticize me behind my back]	*
21	Hay gente que me incita hasta el punto que llegamos a pegarnos [There are people who provoke me to the point of fighting with them]	*
22	Algunas veces pierdo los estribos sin razón [Sometimes I lose my temper for no reason]	*
23	Desconfío de desconocidos demasiados amigables [I'm suspicious of strangers who are too friendly]	*
24	No encuentro ninguna buena razón para pegarle a una persona [I can't find any good reason to hit someone]	*
25	Tengo dificultades para controlar mi genio [I have difficulty controlling my temper]	*
26	Algunas ocasiones siento que la gente se está riendo de mí a mis espaldas [Sometimes I feel that people are laughing at me behind my back]	*
27	He amenazado a gente que no conozco [I've threatened people I don't know]	*
28	Cuando la gente se muestra especialmente amigable, me pregunto qué querrán [When people come over as especially friendly, I ask myself what they want from me]	*
29	He llegado a estar tan furioso que rompía cosas [I've sometimes got so angry that I've broken things]	*

Note: The items marked with asterisk belong in AQ brief form

Socio-demographic Questionnaire. A socio-demographic questionnaire was used for distinguishing participants in relation to sex, age, major and university.

Brief Violence Screening Scale was designed especially for this study by its principal author. This scale consists of four questions with yes/no response for assessing violent behaviour:

"In the last six months, have you tried to solve a problem with another person using violence?"

"In the last six months, have you pushed someone because you were annoyed?"

"In the last six months, have you used foul language with someone during an argument?"

"In the last six months, have you insulted someone in an argument?"

Once the database was constructed, participants who answered "yes" to at least three out of the four questions were categorized, for the purposes of this research, as "Violent" and the rest as "Not Violent".

Data analysis

Internal consistency was calculated by Cronbach's alpha coefficient estimation for the AQ total and its factors. Global sex differences for AQ and its subscales were calculated by Student t-test for independent samples.

All tests were two-tailed and the level of significance was set at $p < .01$ or $< .001$. Pearson's correlation coefficients between the criterion test and the AQ total and subscales scores were determined to evaluate convergent validity.

Confirmatory factor analysis (CFA) was used to evaluate the factor structure of the scale. The suggested choice to analyze categorical data using a CFA consisted of obtaining the polychoric correlations matrix and then proceeding to estimate the model parameters using Mean- and Variance-adjusted Weighted Least Square (WLSMV). The above procedure allows obtaining a "robust" modification of the quality statistics of goodness of fit in the analyzed model, as well as appropriate estimates of the parameters and their standard errors (Finney & Di Stefano, 2006; Flora & Curran, 2004).

The goodness of fit of the models analyzed through CFA was made with the following goodness-of-fit indices: statistics: (a) Chi-square (χ^2), (b) Confirmatory Factor Index (CFI), (c) Tucker-Lewis Index (TLI), (d) Root Mean Square Error of Approximation (RMSEA) and its 90% confidence interval (CI). Proposed values of .95 or higher for TLI and CFI and a value of less than .08 for RMSEA confidence interval upper limit has been shown to be indicative criteria of a good fit for a model (Bentler, 2006; Byrne, 2012; Hu & Bentler, 1999; Kline, 2010). These last analyses were carried out using the Mplus 7.1 software (Muthén & Muthén, 1998-2011).

The general statistical analyses and those related to DIF analysis in relation between USS students and DISE patients were carried out with SPSS Version 17.0 (SPSS Inc., 2008), and with G*Power version 3.1.5 (Faul, Erdfelder, Buchner, & Lang, 2009) for measuring the effect size d .

Results

Confirmatory factor analysis

First, we proceeded to analyze the quality of fit of the model of four factors proposed by Buss and Perry (1992) to all items of the

scale (see Figure 1). Although the result obtained for the RMSEA index (.057) and its CI [0.050, 0.064] indicate an adequate fit of the model, the values of CFI (.91), TLI (.90) and χ^2 (659.07, $p < .001$) provide contradictory evidence for this result.

The quality fit of the reduced version of the scale was then analyzed (Vigil-Colet et al., 2005, see Figure 2). Results associated with the coefficient RMSEA (.057) and its CI [0.046, 0.067] were equivalent to those obtained for the full scale. However, the results of the IFC (.94) and FTA (.93) coefficients had values very close to the values considered indicative of a good fit.

It was decided, from the results obtained, to select the four factor model of the reduced scale as the model that best fits the data analyzed in comparative terms.

All factorials loads were statistically significant ($p < .001$), as well as the six correlations between the factors ($p < .001$). Figure 3 shows the parameters associated with the selected model.

A differential item functioning analysis according to gender was then performed. Considering the sample size of this study, a MIMIC model was used as a DIF analysis approximation. For this purpose, a new model was specified in which the gender variable effect was loosely estimated (0: Male and 1: Female) on each of the four factors; at the same time, the effect of this variable on each of the items of the reduced scale was specified at 0. The existence of evidence of a DIF associated with gender was determined by the analysis of the values of the Modification Indices associated with every item.

The results of this analysis indicated that there is only one DIF effect associated with gender. This effect is associated with Item

1. The MIMIC model was estimated again, this time releasing the gender effect estimation on Item 1. A coefficient of .68 ($p < .001$) was obtained, which allows for the conclusion that women have a greater tendency to agree with the item “From time to time I can’t control the impulse to hit someone else” compared to men. The results of the fit quality of this model were: RMSEA = .053, 95% CI [0.042, 0.063], CFI = (.94), TLI = (.94) and $\chi^2 = 296.58$, $p < .001$.

Finally, the results of the previous model in terms of differences between the means in men and women for each factor were analyzed. These findings indicated that women had lower average in both the Physical Aggression factor (difference between means: - 0.81, $p < .001$) and in the Verbal Aggression factor (difference between means: - 0.40, $p < .05$), and these are the unique statistically significant differences.

Analysis of internal consistency and temporal stability of the scores

Total internal consistency of the total AQ was adequate, yielding a Cronbach’s alpha of $\alpha = .89$. Analysis of the internal consistency of the items making up the Physical Aggression factor revealed $\alpha = .80$; in the case of Verbal Aggression, $\alpha = .66$; in Anger $\alpha = .60$; and Hostility $\alpha = .61$.

The temporal stability of the instrument was measured through its administration at two different points in time. A 80-day interval was used on the sample of 56 third-year psychology students at University of Concepción, obtaining a Pearson product-moment

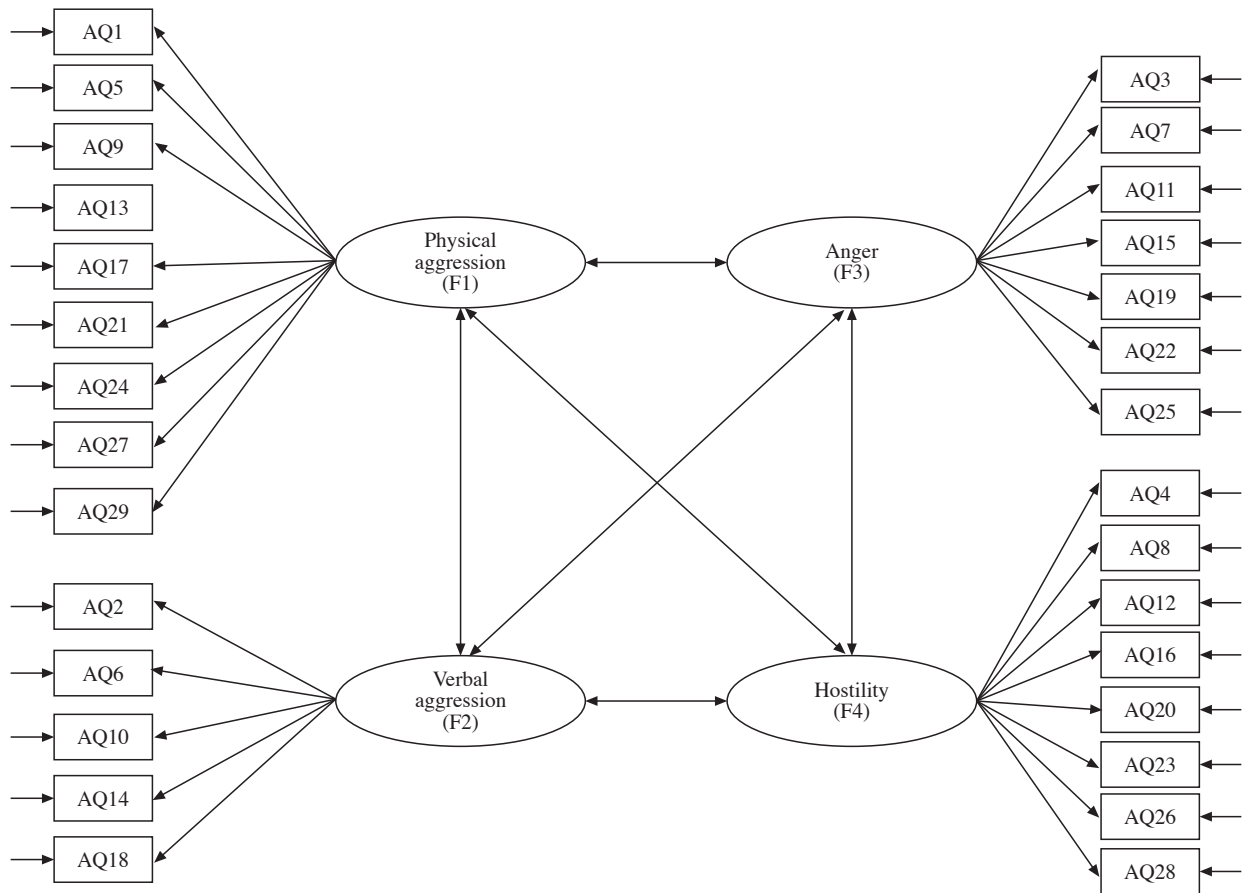


Figure 1. Hypothesized structural equation model for AQ-29 version (Buss & Perry, 1992)

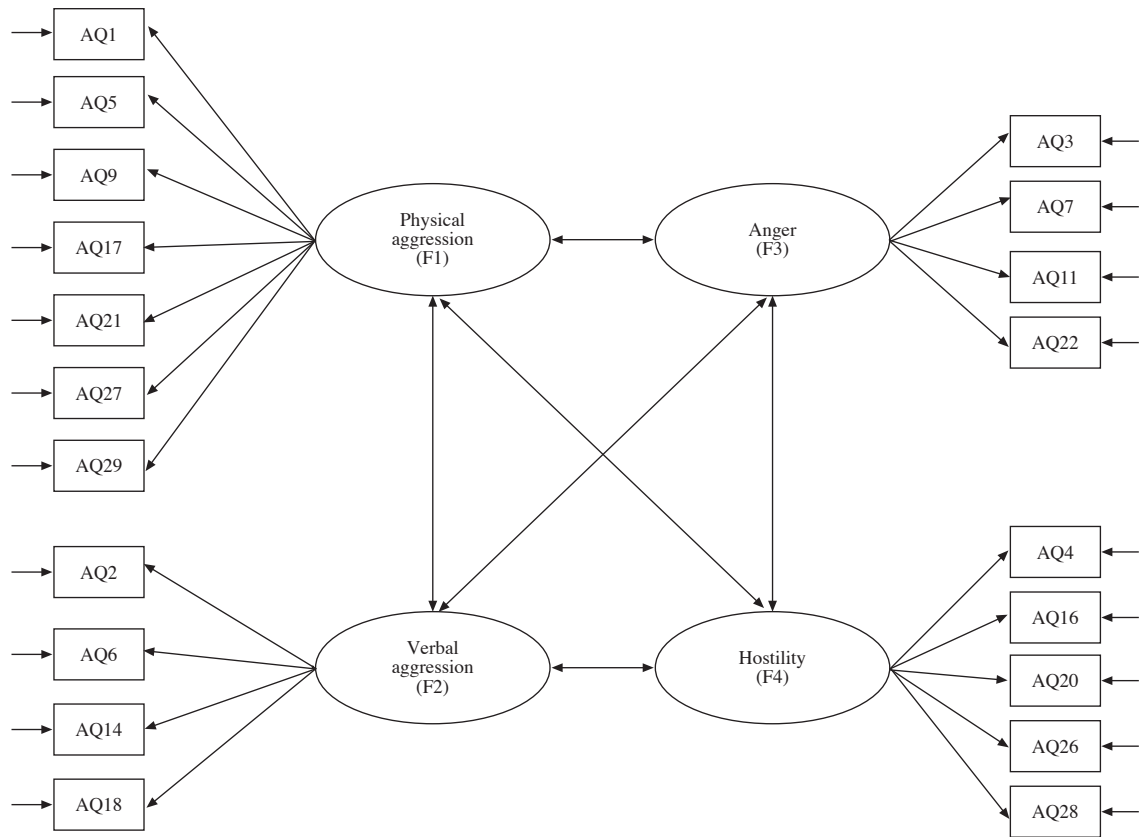


Figure 2. Hypothesized structural equation model for brief form of AQ (Vigil-Colet et al., 2005)

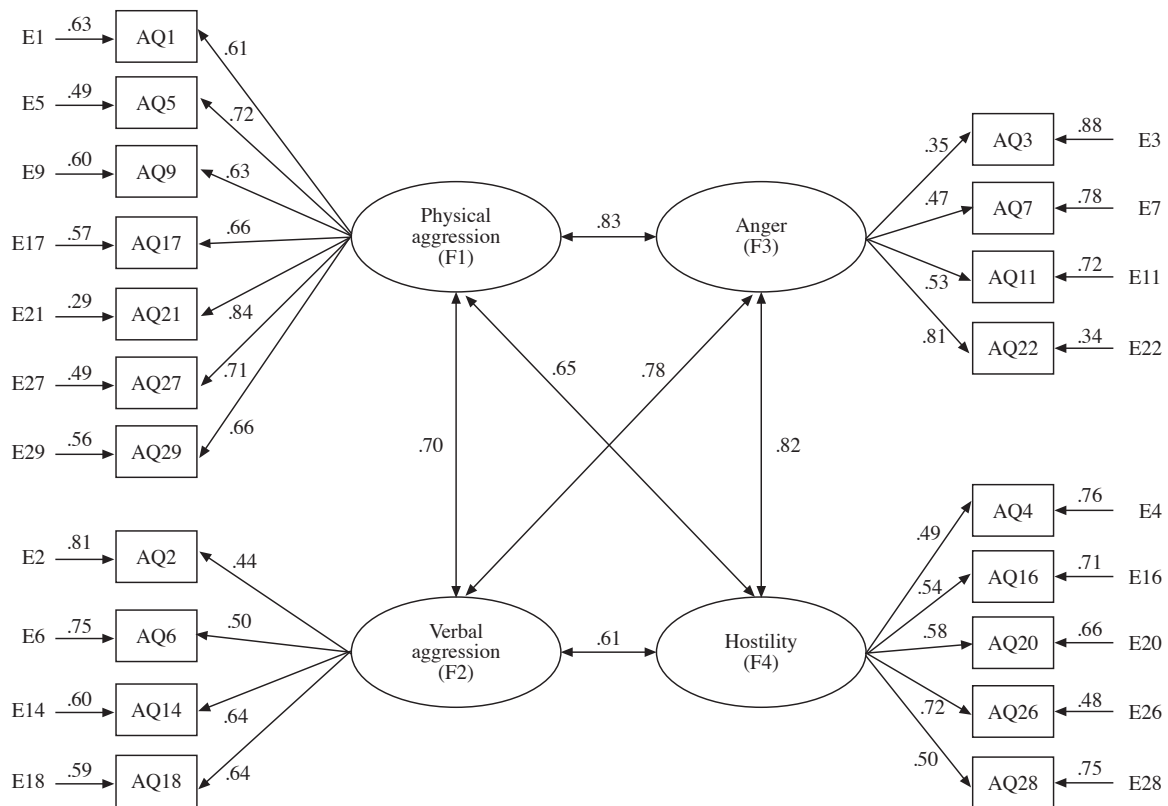


Figure 3. Results of the CFA for the brief form of AQ (Vigil-Colet et al., 2005)

correlation coefficient of $r(56) = .89, p < .01$, which indicates high temporal stability of AQ.

Evidence of validity of the scores

To assess the validity evidence in relation to external variables of the Chilean version of the AQ-29 and its brief form, we calculated Pearson correlations between the scores obtained on that scale and the Psychological Aggression and Physical Aggression Subscales of the CTS-2, and between its scores and those obtained on the Salvo Impulsivity Scale. The relation between the Aggression variables, assessed through the AQ-29, and Psychological Aggression (CTS) yielded an $r(218) = .347, p < .01$. The relation between the Aggression variables (AQ-29) and Physical Aggression (CTS) yielded an $r(215) = .271, p < .01$, and the relation between the Aggression variable (AQ-29) and Impulsivity yields a $r(222) = .460, p < .01$ (for these and AQ-20 version, see Table 2).

To find evidence of discriminant validity, we compared the mean scores of the total USS sample with the scores of the sub-sample of 51 individuals categorized as “Violent” from the total sample of students involved in the project run at DISE-UDEC. The mean score for the USS sample was 66.97 points, while the score of the DISE-UDEC participants was 89.86 points. The Student *t*-test for independent samples yielded a value of $t = -7.66, p < .001, d = 1.35$, indicating that the two types of samples differ from one another, and that the AQ-29 presents evidence of discriminant validity. The value of the effect size indicates a large effect between the means of the two groups.

It is important to indicate that, in relation to gender, the Student *t*-test for independent samples yielded a value of $t = 2.232, p < .001$, indicating that males ($M = 69.9$) obtain higher scores than females ($M = 65.4$).

Differential Item Functioning (DIF) by group

The DIF analysis in relation to the two groups, the USS students and the DISE patients, revealed the presence of non-

uniform DIF (Gómez & Hidalgo, 1997) in two items (4 and 26). These two items yielded Lui-Agresti *z* values of -3.21 and -2.24, while the Cox’s standardized non-centrality parameter obtained values of -2.74 and -2.07, respectively. This is consistent with the value obtained in the differential functioning test, which yielded a T^2 value of .086, which is considered to indicate a moderate DTF (Croudace & Brown, 2012).

Discussion

The aim of this study was to explore the measurement properties of the AQ-29 with a sample of Chilean university students. The results indicate good psychometric qualities and high internal consistency among the scores, consistent with the results obtained in the original study (Buss & Perry, 1992) and corroborated in other previous research (Andreu et al., 2002; García-León et al., 2002; Morren & Meesters, 2002; Prochazka & Agren, 2001; Reyna et al., 2011; Santisteban & Alvarado, 2009; Sommantico et al., 2008).

The four factors that emerge after the factor analysis presented an adequate internal reliability. A high level of temporal stability was also seen, which is in accordance with the findings of the original study (Buss & Perry, 1992). Confirmatory factor analysis supported a structure of four factors that are consistent with those proposed by the original authors, but considering the short version of twenty items proposed by Vigil-Colet et al. (2005).

Several studies have verified this four factor structure, such as Gallardo-Pujol, Kramp, García-Forero, Pérez-Ramírez, and Andrés-Pueyo (2006), García-León et al. (2002), Santisteban and Alvarado (2009), and even in Latin America, Chahín-Pinzón, Lorenzo-Seva, and Vigil-Colet (2012). It is interesting that the Santisteban and Alvarado (2009) research includes young people of up to 17 years old in the sample. Four factors were found by Chahín-Pinzón et al. (2012) in their study with adolescents (up to 16 years old) as well as by García-León et al (2002) who examined university students (Study 1, ages between 17 and 24 years old). In fact, even though the Argentinean version only found two factors (Reyna et al., 2011), the best fit for the model was obtained for the four-factor reduced version and was obtained in adolescents between 12 and 19 years. This last study has similarities with the structure found in this study.

Regardless, it is always important to be clear, as pointed out by Reyna et al. (2011) that “not all studies have used the same extraction and rotation methods, consequently comparisons should be taken with caution” (p. 34).

The evidence of convergent validity in relation to other external variables reveals, first of all, the difficulties of finding criterion tests with antecedents of reliability or validity in the Chilean context. This was the main reason that we decided to work with the CTS-2, which assesses different forms of aggression in romantic relationships, which is why the factor of “being in a stable relationship” was a condition to participate in the study. A similar situation occurs with the Impulsivity Scale which reports a reliability lower than commonly accepted. This aspect could be considered a limitation of this research.

However, in spite of these problems, the results obtained indicate a correlation between the physical aggression, psychological aggression and impulsivity scales. This correlation shows that in Chilean culture this questionnaire measures what it sets out to measure. It is also relevant to consider that when we compared the

Table 2
Correlations between the CTS Psychological Aggression and Physical Aggression subscales, Impulsivity Scale and the AQ (total, brief form and subscales) scores

	a	b	c	d	e	f	g	h	i
a	1								
b	.498**	1							
c	.507**	.489**	1						
d	.436**	.336**	.460**	1					
e	.862**	.733**	.767**	.713**	1				
f	.811**	.721**	.771**	.731**	.977**	1			
g	.430**	.362**	.353**	.207**	.454**	.460**	1		
h	.321**	.241**	.247**	.225**	.351**	.347**	.376**	1	
i	.271**	.036	.106	.228**	.246**	.271**	.238**	.659**	1

a: AQ Physical Aggression; b: AQ Verbal Aggression; c: AQ Anger; d: AQ Hostility; e: AQ 20 (short version); f: AQ-29; g: Impulsivity; h: CTS-2 Psychological Aggression; i: Physical Aggression
** All the correlations were statistically significant ($p < .01$).

results of the scale—in groups of students defined as aggressive with those of the complete group of students—, we observed significant differences. This shows that aggressive young people score higher on this scale, and that, therefore, it discriminates aggressive behaviour.

As mentioned earlier, the internal consistency of the instrument was high. In relation to the findings obtained, it should be stressed that the items making up the final AQ-29 scale were comprehensible for the students who participated in the study, at both universities and in all the majors considered.

In relation to this point, it should be highlighted that while this preliminary study confirms the appropriateness of the AQ-29 Scale, in global terms, the proposal for a brief version of twenty items is in accordance with the suggestions of previous studies. This shorter version is consistent with the instrument proposed

by Maxwell (2007) in China, which consists of a twelve-item scale, or the brief 20-item scale suggested by Vigil-Colet et al (2005).

The fact that just two items with differential functioning were found between the groups and the moderate DTF indicates, in the authors' opinion, that excluding the screening criterion for violent participant selection, the two groups were similar to one another, in that they were made up of university students without psychiatric pathology.

In sum, considering the number of people to whom the instrument was applied and the diversity of their majors, it is reasonable to assert that the results are generalizable to the young Chilean population. It would be interesting in future studies to be able to make comparisons between the study population and other populations in Chile.

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