

French version of the 12-item Aggression Questionnaire

Preliminary psychometric properties

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The Aggression Questionnaire

Historically, aggression has been evaluated in a variety of ways. Among the self-reported measures, the Buss-Durkee Hostility Inventory (Buss & Durkee, 1957) has been one of the most popular questionnaire. On the basis of this previous work, Buss and Perry proposed in 1992 a psychometrically improved and updated measure of aggression: The Aggression Questionnaire (AQ). The original version of the AQ contains 29 items and is designed to assess four dispositional dimensions of aggression: Physical Aggression, Verbal Aggression, Anger, and Hostility.

Physical and Verbal Aggression involve hurting or harming others and represent the instrumental or motor component of the behavior. **Anger** involves physiological arousal and preparation for the behavior and represent the emotional component of the behavior. Finally, **Hostility** consist of feelings of ill will and injustice and represent the cognitive component of the behavior. Using confirmatory factor analysis (CFA), Buss and Perry (1992) showed that both the multidimensional four-factor model and a hierarchical factor model (four correlated first orders factors reflect a second factor of general aggression) had good fit to the data. Moreover, using peer nomination procedure, Buss and Perry (1992) found reasonable positive correlations with the self-report measures.

Several studies highlighted the psychometric quality of the 29-item AQ in different contexts (e.g. Archer, Holloway & McLoughlin, 1995; Fossati, Maffei, Acquarini & Di Ceglie, 2003; Condon, Morales-Vives, Ferrando, Vigil-Colet, 2006).

Preserving the conceptual content of the original model, Bryant and Smith (2001) developed a shortened better fitting version of 29-item AQ. Omitting items with low or multiple loadings as well as negatively worded items, Bryant and Smith (2001) proposed a 12-item version of the AQ. The four-factor structure was replicated in various samples of adults (Bryant & Smith, 2001) and adolescents (Ang, 2007). Despite its interest, this short version has rarely been used with non-college samples outside England and North America.

This research is a first step in the validation of a French version of the 12-item AQ.

Procedure

The twelve items of the questionnaire (Bryant & Smith, 2001) were translated in French. In order to keep the informal style, literal translation was not appropriate. We have looked for equivalent expressions in French: for example "Sometimes, I fly off the handle for no good reason" became "Parfois, je pète un câble sans raison". Participants completed the 12 items (self-reported behavior and feelings) using a Likert-scale from 1 (*Not at all like me*) to 6 (*Completely like me*).

Study 1: exploratory analysis

Sample : 364 participants from various socioeconomic status (34% men; 66% women), ranging in age from 15 to 83 years (M=29.0; SD=13.5). 209 participants completed the questionnaire on Internet (on-line version) and 155 used the pen-and-paper version.

All the data were subjected to principal component analysis with orthogonal (varimax) rotation. Factors were extracted whose eigenvalues were greater than 1.0. Cronbach's alpha coefficient of the whole questionnaire was 0.80.

Table 1. – Item factor loadings, communality and reliability

Scales / Items	Factor				Communi- nality	Relia- bility	
	I	II	III	IV			
Aggression physique							
01. Si on me provoque, je peux cogner.	.82				.71	.72	
05. Il y a des personnes qui me gonflent tellement qu'on peut en arriver aux mains.	.80				.68		
09. J'ai déjà menacé quelqu'un.	.70				.52		
Aggression verbale							
02. J'exprime très souvent mon désaccord avec les autres.		.81			.67		
06. Je ne peux pas m'empêcher d'entrer en conflit quand les autres ne sont pas d'accord avec moi.		.64			.55		
10. Mes amis disent que j'ai parfois l'esprit de contradiction.		.67			.55		
Colère							
03. Je m'emporte rapidement.		.56			.58		
07. Parfois, je pète un câble sans raison.		.77			.63		
11. J'ai du mal à contrôler mon humeur.		.70			.61		
Hostilité							
04. Parfois, j'ai l'impression que je n'ai pas été gâté par la vie comme les autres.			.91		.84		
08. Je me demande parfois pourquoi je suis tellement en colère pour certaines choses.		.76			.61		
12. Les autres semblent toujours avoir plus de chances que moi.			.91		.85		

Factor loadings smaller than .50 have been omitted

Table 1 shows that all items – with one exception – were retained and assigned to their original subscale. As mentioned, item 08 is problematic and has a cross-loading of 0.76 on the Anger factor. Translation of the word "bitter" (became "colère" in French) was obviously not appropriate and this item logically loads on the Anger factor ("colère").

This item was therefore modified for the second study with the literal translation of the word "bitter" (less ordinary word in French) :

New translation

08. Je me demande parfois pourquoi je ressens tant d'amertume.

Study 2: confirmatory analysis

Sample : 197 participants from various socioeconomic status (44% men; 56% women), ranging in age from 13 to 65 years (M=24.2; SD=14.5). Data were collected with pen-and-paper version.

Confirmatory factor analysis (using AMOS 16.0) was used to evaluate the goodness-of-fit of this model (figure 1), with the new translation of the item 08.

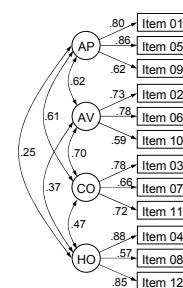


Figure 1. – Measurement model

Table 2. – Fit indexes

Chi²/dl	2.70
Adjusted goodness-of-fit index (AGFI)	.85
Comparative fit index (CFI)	.91
Root-mean-square error of approximation (RMSEA)	.08

CFA provides acceptable goodness-of-fit indexes (Table 2). The RMSEA (=0.08) indicates a reasonably close fit for a small sample (Sharma, Mukherjee, Kumar & Dillon, 2005). Cronbach alphas were computed and suggest that the internal consistency is acceptable for 3-item subscales (.81 for Physical Aggression, .73 for Verbal Aggression, .77 for Anger, and 0.80 for Hostility) and considerable for the whole questionnaire (.85).

Conclusion

This research based on two samples (exploratory and confirmatory factor analysis) provides a first step in the validation of the French-version of the 12-item Aggression Questionnaire.

- The four-factor structure has been confirmed.
- The scale and subscales proved to have good reliability.

Further studies are warranted to examine convergent and predictive validity of the AQ-12 (French version) as well as to assess whether the present results can be confirmed in various contexts.

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References

Ang, R.P. (2007). Factor structure of the 12-item aggression questionnaire: Further evidence from Asian adolescent samples. *Journal of Adolescence*, 30(4), 671-685.
Archer, J., Holloway, R., & McLoughlin, K. (1995). Self-reported physical aggression among young men. *Aggressive Behavior*, 21, 325-342.
Bryant, F.B., & Smith, B.D. (2001). Refining the architecture of aggression: A measurement model for the Buss-Perry Aggression Questionnaire. *Journal of Research in Personality*, 35(2), 138-167.

Buss, A.H., & Perry, M. (1992). The Aggression Questionnaire. *Journal of Personality and Social Psychology*, 63(3), 452-459.
Buss, A.H., & Durkee, A. (1957). An inventory for assessing different kinds of hostility. *Journal of Consulting Psychology*, 21, 343-349.
Condon, L., Morales-Vives, F., Ferrando, P.J., & Vigil-Colet, A. (2006). Sex differences in the full and reduced versions of the Aggression Questionnaire. A question of differential item functioning? *European Journal of Psychological Assessment*, 22(2), 92-97.

Fossati, A., Maffei, C., Acquarini, E., & Di Ceglie, A. (2003). Multigroup confirmatory component and factor analyses of the Italian version of the Aggression Questionnaire. *European Journal of Psychological Assessment*, 19(1), 54-65.
Sharma, S., Mukherjee, S., Kumar, A., & Dillon, W.R. (2005). A simulation study to investigate the use of cutoff values for assessing model fit in covariance structure models. *Journal of Business Research*, 58(7), 935-943.

The data were collected for research projects of the clinical psychology unit. We would like to thank the students who have joined these projects.