

# INTERPERSONAL REACTIVITY INDEX ADOLESCENTS VERSION: FACTOR STRUCTURE AND PSYCHOMETRIC PROPERTIES

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## INTRODUCTION

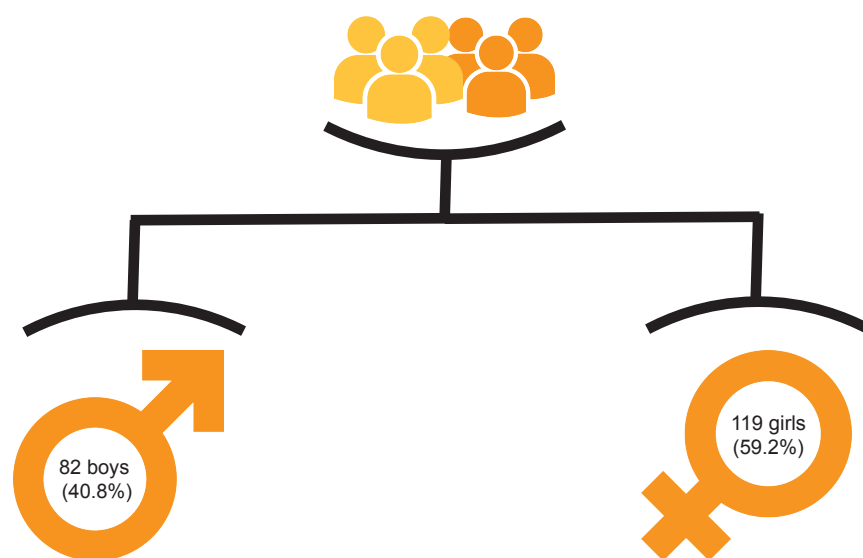
Empathy can be defined as one's ability to understand and share the feelings of another. It is a multi-faceted construct and the Interpersonal Reactivity Index (IRI) is a widely used tool for its assessment. An IRI Portuguese version for adults is already available revealing good psychometric properties.

### Objectives:

Adapt the IRI for adolescents and explore its factor structure and psychometric characteristics. Study the association between the IRI and other types of positive affect and psychopathological symptomatology.

## METHODS

### Participants



Ages between 11 and 18 years old ( $M = 14.77$ ,  $SD = 1.66$ ), attending the 7th to 12th year of schooling ( $M = 9.45$ ,  $SD = 1.53$ ).

### Instruments

- Interpersonal Reactivity Index (IRI; Davis, 1980)
- Anxiety Depression and Stress Scale (DASS 21; Lovibond & Lovibond, 1995)
- Types of Positive Affect Scale (ETAP; Gilbert et al., 2008)

### Procedures

Authorization to conduct the research was obtained by the relevant authorities (General Direction of Education), the education institution's boards and by the participants' parents. Participants provided their informed consent.

## RESULTS

### Exploratory Factor Analysis

We conducted an exploratory factor analysis using the Principal Components Analysis with a Varimax rotation. Results indicated that the scale presented a four-factor structure (similar to the adult version). The "Personal Distress" dimension explained 21.96% of the variance, with items presenting factor loadings ranging from .45 (item 18) to .73 (item 14). The "Fantasy" factor explained 13.20% of the variance, with items presenting factor loadings ranging from .56 (item 6) to .77 (item 13). The "Perspective-Taking" factor explained 9.44% and comprised items with factor loadings ranging from .43 (item 8) to .76 (item 7). Finally, the fourth factor, "Empathic Concern" explained 6.55% of the variance, with items presenting factor loadings ranging from .43 (item 1) to .74 (item 3).

### References

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## Descriptives and Validity Analysis

Table 1 - Mean values of IRI factors for the total sample, gender differences and internal consistency

	Total (N = 201)		Boys (n = 82)		Girls (n = 119)		t	p	α
	M	SD	M	SD	M	SD			
Personal Distress	15.57	4.84	13.51	4.54	16.99	4.54	5.34	<.001	.67
Fantasy	14.83	5.41	11.87	4.86	16.87	4.80	7.22	<.001	.81
Perspective Taking	16.36	3.92	15.60	3.84	16.88	3.90	2.31	.022	.77
Empathic Concern	8.49	2.13	7.62	2.09	9.09	1.95	5.10	<.001	.54

## IRI - Relation with other measures

Table 2 - Correlations between the IRI factors and types of positive affect and symptoms of psychopathology

	Empathy - IRI			
	Personal Distress	Fantasy	Perspective Taking	Empathy Concern
Activation/Excitement	-.05	.15*	.16*	.22**
Relaxation	-.08	-.08	.15*	-.08
Warmth	-.08	.11	.13	.12
Anxiety	.31**	.05	-.08	-.07
Depression	.20**	-.02	.05	-.21**
Stress	.38**	.13	.03	-.01

Note \*\* p <.001; \* p <.05

## DISCUSSION

Results confirmed the adequacy of the scale in this population, replicating the findings of the original study (Davis, 1983; Limpo et al., 2010).

The adolescents version structure is similar to that of the adults version, although some dimensions have lower internal consistencies, namely the empathic concern dimension. In adolescents, girls seem to show more empathy (through different dimensions) when compared to boys.

The Personal Discomfort factor was positively associated with anxiety, depression and stress symptoms, showing no significant association with the types of positive affect. On the other hand, the Perspective Taking, Fantasy and Empathic Concern factors revealed a positive association with positive affects (activation/excitation and relaxation). These dimensions were also negatively associated with depressive symptomatology.

Results offer preliminary evidence on the adequacy of the IRI to be used with adolescents. This may have important implications for both prevention strategies and interventions addressing interpersonal and emotional difficulties in the critical developmental period of adolescence.

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