

alternatives and avoiding future adverse outcomes. Monitoring the mental health of mothers and children is essential, but it is also fundamental that policy makers have a more active response.

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A Brazilian adaptation of the Affective and Cognitive Measure of Empathy

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This study translated and validated a Brazilian-Portuguese version of the Affective and Cognitive Measure of Empathy (ACME-BP). Whereas most empathy scales measure cognitive empathy and affective empathy, their affective subscale only reflects affective resonance – feeling the same emotion as others. The ACME expands the measurement of affective empathy with a third subscale that measures affective dissonance – feeling an opposing emotion, such as pleasure from others' pain, or pain from others' pleasure. Compared to previous measures of empathy, which predict 1-4% of the variance in aggression and externalizing disorders,¹ the ACME predicts 15-30% of variance in these constructs.²

This study recruited 338 Brazilian community members, who completed the 28-item Interpersonal Reactivity Index (IRI), a traditional measure of empathy,³ and the 36-item ACME-BP. To construct the ACME-BP, the English ACME was first translated by a native Brazilian-Portuguese speaker and then back-translated by a native speaker of English, naive to the ACME. The back-translated version was compared to the original English ACME by one of its authors (Vachon) and two other collaborators who judged if the two versions were equivalent in meaning. A sample of 10 people then evaluated the readability of ACME-BP items, and three experts judged the semantic validity of each item.

After collecting the data, structural equation modeling was used to validate the three-factor model of empathy. The data were suitable for factor extraction, based on a Kaiser-Meyer-Olkin index of 0.90 and Bartlett's test of sphericity ($p < 0.001$). The model had good fit: $\chi^2_{(591)} = 697.46$, $p = 0.002$; comparative fit index = 0.949; Tucker-Lewis index = 0.945; root mean square error of approximation = 0.023.⁴ Factor loadings are presented in Table 1; only items that loaded on a theory-congruent factor and had adequate factor loadings were retained, defined as a factor loading above 0.32.⁵ The factor loadings for ACME and ACME-BP were very similar, differing on average by 0.10. They also showed nearly identical factor correlations: across both measures, cognitive empathy was correlated with affective resonance at 0.32-0.34, cognitive empathy with affective dissonance at 0.16-0.20, and affective resonance with affective dissonance at 0.71-0.75. Taken together, these findings provide evidence of structural generalizability.

Finally, the ACME-BP scales were internally reliable ($0.81 \leq \alpha \leq 0.90$) and had high 6-month test-retest reliability ($0.81 \leq \rho \leq 0.89$). Theoretically similar constructs on the IRI correlated strongly with those of the ACME-BP ($0.40 \leq r \leq 0.66$), providing evidence of

Table 1 Item descriptions and factor loadings for the Affective and Cognitive Measure of Empathy - Brazilian-Portuguese version (ACME-BP) and the original English version (ACME)

Item	Description	Factor loadings					
		Brazilian ACME			English ACME		
		COG	RES	DIS	COG	RES	DIS
Cognitive empathy (COG)							
1r	I have a hard time reading people's emotions / <i>Tenho dificuldade para ler as emoções dos outros</i>	0.72	--	--	0.81	--	--
3	I can tell when someone is afraid / <i>Eu consigo perceber quando alguém está com medo</i>	0.60	--	--	0.59	--	--
4	It's obvious when people are pretending to be happy / <i>É óbvio para mim quando as pessoas fingem que estão felizes</i>	0.39	--	--	0.60	--	--
9	I usually understand why people feel the way they do / <i>Normalmente, eu compreendo por que as pessoas se sentem de determinada maneira</i>	0.58	--	--	0.65	--	--
14r	I have a hard time figuring out what someone else is feeling / <i>Tenho dificuldade para compreender o que outra pessoa está sentindo</i>	0.72	--	--	0.78	--	--
15	I can tell when people are about to lose their temper / <i>Eu consigo perceber quando as pessoas estão prestes a perder a calma</i>	0.59	--	--	0.58	--	--
16	I can usually predict how someone will feel / <i>Geralmente, eu consigo prever como alguém irá se sentir</i>	0.67	--	--	0.66	--	--
25	I can usually tell how people are feeling / <i>Normalmente, eu consigo perceber como as pessoas estão se sentindo</i>	0.80	--	--	0.82	--	--
31r	I am not good at understanding other people's emotions / <i>Eu não sou bom em compreender as emoções dos outros</i>	0.75	--	--	0.71	--	--
33	I can usually guess what's making someone angry / <i>Normalmente, eu consigo adivinhar o que está deixando alguém com raiva</i>	0.67	--	--	0.69	--	--
34	People don't have to tell me when they're sad, I can see it in their faces / <i>As pessoas não precisam me dizer quando estão tristes, eu consigo ver em seus rostos</i>	0.73	--	--	0.87	--	--
35r	I find it hard to tell when someone is sad / <i>É difícil para mim perceber quando alguém está triste</i>	0.62	--	--	0.81	--	--
Affective resonance (RES)							
7	It makes me feel good to help someone in need / <i>Ajudar alguém que está passando necessidade faz com que eu me sinta bem</i>	--	0.64	--	--	0.86	--
8	I get excited to give someone a gift that I think they will enjoy / <i>Eu fico empolgado(a) ao dar para alguém um presente que penso que irá gostar</i>	--	0.32	--	--	0.43	--
12r	I don't worry much about hurting people's feelings / <i>Eu não me preocupo muito em ferir os sentimentos dos outros</i>	--	0.60	--	--	0.72	--
13r	I don't really care if other people feel happy / <i>Não me importo se outras pessoas estão felizes</i>	--	0.39	--	--	0.54	--
17r	I don't really care if people are feeling depressed / <i>Não me importo se outras pessoas estão deprimidas</i>	--	0.68	--	--	0.68	--
22r	Other people's feelings don't bother me at all / <i>Os sentimentos das outras pessoas não me incomodam nem um pouco</i>	--	0.52	--	--	0.66	--
23	I feel awful when I hurt someone's feelings / <i>Sinto-me péssimo(a) quando firo os sentimentos de alguém</i>	--	0.55	--	--	0.60	--
24r	Other people's misfortunes don't bother me much / <i>As desgraças dos outros não me incomodam muito</i>	--	0.75	--	--	0.75	--
28	If I see that I am doing something that hurts someone, I will quickly stop / <i>Se eu percebo que estou fazendo algo que machuca alguém, eu paro na mesma hora</i>	--	0.45	--	--	0.59	--
29	I often try to help people feel better when they are upset / <i>Frequentemente, tento ajudar as pessoas a se sentirem melhor quando estão chateadas</i>	--	0.49	--	--	0.60	--
30	I enjoy making others happy / <i>Eu sinto prazer em fazer os outros felizes</i>	--	0.58	--	--	0.84	--
32r	People have told me that I'm insensitive / <i>Já me disseram que sou insensível</i>	--	0.59	--	--	0.57	--
Affective dissonance (DIS)							
2r	I think it's fun to push people around once and a while / <i>Acho divertido intimidar as pessoas de vez em quando</i>	--	--	0.53	--	--	0.51
5r	I love watching people get angry / <i>Adoro ver as pessoas ficarem com raiva</i>	--	--	0.72	--	--	0.56
6r	I enjoy seeing strangers get scared / <i>Sinto prazer em ver pessoas que não conheço se assustarem</i>	--	--	0.45	--	--	0.55

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Table 1 (continued)

Item	Description	Factor loadings					
		Brazilian ACME			English ACME		
		COG	RES	DIS	COG	RES	DIS
10r	When my friends are having a good time I often get angry / Frequentemente me sinto irritado(a) quando meus amigos estão se divertindo	--	--	0.30	--	--	0.41
11r	People who are cheery disgust me / Sinto desprezo por pessoas "alegrinhas"	--	--	0.47	--	--	0.72
18r	I like making other people uncomfortable / Gosto de deixar os outros desconfortáveis	--	--	0.52	--	--	0.50
19r	I get a kick out of making other people feel stupid / Sinto prazer em fazer com que os outros se sintam bobos	--	--	0.66	--	--	0.57
20r	When my friends get angry I often feel like laughing / Quando meus amigos ficam com raiva, muitas vezes sinto vontade de rir	--	--	0.54	--	--	0.55
21r	Sometimes I enjoy seeing people cry / Às vezes, sinto prazer em ver pessoas chorando	--	--	0.53	--	--	0.69
26r	Sometimes it's funny to see people get humiliated / Às vezes, é engraçado ver pessoas sendo humilhadas	--	--	0.52	--	--	0.45
27r	If I could get away with it, there are some people I would enjoy hurting / Se eu pudesse sair impune, ha algumas pessoas que eu sentiria prazer em machucar	--	--	0.64	--	--	0.45
36r	I admit that I enjoy irritating other people / Admito que sinto prazer em irritar outras pessoas	--	--	0.73	--	--	0.49



Cognitive empathy (COG) = 1r, 3, 4, 9, 14r, 15, 16, 25, 31r, 33, 34, 35r.

Affective resonance (RES) = 7, 8, 12r, 13r, 17r, 22r, 23, 24r, 28, 29, 30, 32r.

Affective dissonance (DIS) = 2r, 5r, 6r, 10r, 11r, 18r, 19r, 20r, 21r, 26r, 27r, 36r.

r = reverse scored item; items are administered on 5-point Likert scale ranging from strongly disagree (1) to strongly agree (5). On all three scales (including DIS), high scores indicate greater empathy.

concurrent validity. It is worth noting that the sample was disproportionately young (20% of participants older than 38), limiting the generalizability of the results. Future work should evaluate the ACME in older Brazilian samples and in clinical samples. The ACME-BP is a short, useful measure of empathy that shows evidence of internal consistency, test-retest reliability, and structural generalizability in a Brazilian sample.

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Return to work after severe traumatic brain injury: further investigation of the role of personality changes

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Although behavioral changes after traumatic brain injury (TBI) have been linked to work disability, research in the area is limited, especially in developing countries.¹ In severe TBI, behavioral sequelae mainly include depression and personality changes. The latter is marked by varying levels of apathy, disinhibition, aggression, and affective lability.² In a study published in the *Brazilian Journal of Psychiatry*,³ we found that a diagnosis of