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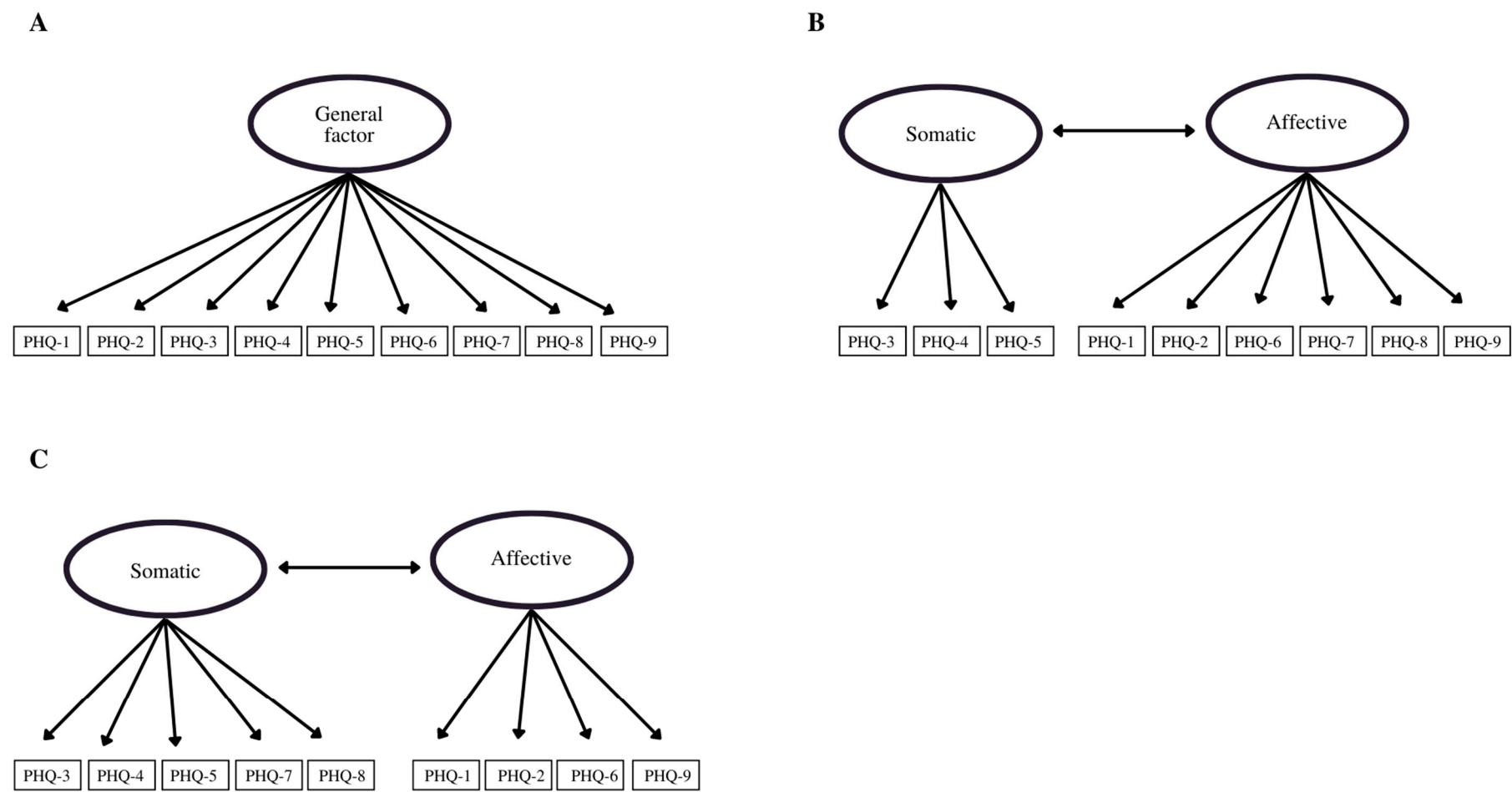
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**Figure S1.** Tested models of the Spanish version of PHQ-9



Note: A: Originally validated one-factor model of Kroenke [1] (Model 1); B: Two-factor model of Krause [2] (Model 2a); C: Two-factor model of Richardson and Richard [3] (Model 2b).

**Table S1.** Distribution of PHQ scores and 12 month-CIDI Major Depressive Disorder by immigrant group

Questionnaire	Colombia (n=94)				Peru (n=333)				Venezuela (n=375)				Other LA (n=95)			
			CIDI				CIDI				CIDI				CIDI	
	Symptom severity	n	(%)	negative positive	n	(%)	negative positive	n	(%)	negative positive	n	(%)	negative positive	n	(%)	negative positive
PHQ-9																
None (0-4)		85	(89.0)	85 0	286	(83.0)	286 0	335	(88.0)	334 1	84	(87.9)	84 0			
Mild (5-9)		7	(8.3)	6 1	27	(9.8)	26 1	34	(10.3)	32 2	5	(5.6)	5 0			
Moderate (10-14)		1	(1.9)	1 0	11	(4.2)	11 0	3	(1.0)	3 0	4	(2.3)	4 0			
Severe (≥15)		1	(0.8)	1 0	9	(2.9)	8 1	3	(0.7)	3 0	2	(4.2)	2 0			
PHQ-2																
Minimum (0-2)		89	(91.9)	88 1	312	(92.8)	312 0	363	(96.3)	360 3	91	(98.6)	91 0			
Mild (≥3)		5	(8.1)	5 0	21	(7.2)	19 2	12	(3.7)	12 0	4	(1.4)	4 0			
Total		94	(100.0)	93 1	333	(100.0)	331 2	375	(100.0)	372 3	95	(100.0)	95 0			

Note: Number of cases unweighted and % weighted.

Composite International Diagnostic Interview (CIDI); Latin America (LA); 9-item Patient Health Questionnaire (PHQ-9); 2-item Patient Health Questionnaire (PHQ-2).

**Table S2.** Internal consistency of the Chilean version of the PHQ-9 and PHQ-2 (n=897)

	all (n=897)			
Version	Corrected		Overall	
Item	item-total	Alpha if	Cronbach's	Spearman-
	correlation	item deleted	alpha	Brown
PHQ-9				
1. Anhedonia	0.610	0.899	0.904	
2. Depressed mood	0.724	0.890		
3. Sleep problems	0.687	0.893		
4. Low energy	0.760	0.887		
5. Appetite changes	0.669	0.894		
6. Low self-esteem	0.706	0.891		
7. Concentration difficulty	0.689	0.893		
8. Psychomotor agitation or retardation	0.655	0.895		
9. Suicidal ideation	0.682	0.897		
PHQ-2				
1. Anhedonia	0.604		0.746	0.620***
2. Depressed mood	0.604			

Note: 9-item Patient Health Questionnaire (PHQ-9); 2-item Patient Health Questionnaire (PHQ-2).

\*\*\*  $p \leq 0.001$

**Table S3.** Internal consistency of the Chilean version of the PHQ-9 by immigrant group

Item	Colombia (n=94)			Peru (n=333)			Venezuela (n=375)			Other LA (n=95)		
	Corrected item-total correlation	Alpha if item deleted	Overall Cronbach's alpha	Corrected item-total correlation	Alpha if item deleted	Overall Cronbach's alpha	Corrected item-total correlation	Alpha if item deleted	Overall Cronbach's alpha	Corrected item-total correlation	Alpha if item deleted	Overall Cronbach's alpha
1. Anhedonia	0.451	0.900	0.887	0.795	0.939	0.946	0.524	0.838	0.847	0.578	0.881	0.886
2. Depressed mood	0.540	0.887		0.845	0.936		0.634	0.827		0.747	0.870	
3. Sleep problems	0.845	0.859		0.783	0.940		0.630	0.826		0.609	0.877	
4. Low energy	0.735	0.866		0.810	0.939		0.653	0.823		0.829	0.856	
5. Appetite changes	0.782	0.861		0.741	0.943		0.566	0.832		0.599	0.877	
6. Low self-esteem	0.683	0.872		0.812	0.939		0.595	0.829		0.709	0.868	
7. Concentration difficulty	0.622	0.876		0.812	0.939		0.550	0.834		0.672	0.871	
8. Psychomotor agitation or retardation	0.712	0.875		0.842	0.937		0.575	0.832		0.631	0.881	
9. Suicidal ideation	0.738	0.873		0.723	0.943		0.555	0.841		0.700	0.880	

Note: Latin America (LA).

\*  $p \leq 0.05$ ; \*\*  $p \leq 0.01$  \*\*\*  $p \leq 0.001$ **Table S4.** Internal consistency of the Chilean version of the PHQ-2 by immigrant group

Item	Colombia (n=94)			Peru (n=333)			Venezuela (n=375)			Other LA (n=95)		
	Corrected item-total correlation	Overall Cronbach's alpha	Spearman - Brown	Corrected item-total correlation	Overall Cronbach's alpha	Spearman -Brown	Corrected item-total correlation	Overall Cronbach's alpha	Spearman -Brown	Corrected item-total correlation	Overall Cronbach's alpha	Spearman -Brown
1. Anhedonia	0.398	0.567	0.503***	0.797	0.884	0.725***	0.450	0.582	0.465***	0.624	0.766	0.731***
2. Depressed mood	0.398			0.797			0.450			0.624		

Note: Latin America (LA).

\*  $p \leq 0.05$ ; \*\*  $p \leq 0.01$  \*\*\*  $p \leq 0.001$

**Table S5.** Goodness of fit indices for PHQ-9 factor models by immigrant group

Model	Fit values				Factor correlation
	Immigrant group	$\chi^2$ (df)	CFI	RMSEA (90% CI)	SRMR
One factor 1					
	Colombia	188.508 <sub>(27)</sub> ***	0.764	0.144*** (0.040-0.247)	0.078
	Peru	299.707 <sub>(27)</sub> ***	0.931	0.135*** (0.089-0.182)	0.047
	Venezuela	309.755 <sub>(27)</sub> ***	0.884	0.107*** (0.039-0.164)	0.074
	Other LA	184.314 <sub>(27)</sub> ***	0.599	0.175*** (0.086-0.257)	0.095
	All (n=897)	515.414 <sub>(27)</sub> ***	0.915	0.117*** (0.087-0.149)	0.052
Two factor 2a					
	Colombia	135.412 <sub>(26)</sub> ***	0.881	0.104*** (0.010-0.207)	0.077
	Peru	249.898 <sub>(26)</sub> ***	0.950	0.117*** (0.066-0.166)	0.043
	Venezuela	240.663 <sub>(26)</sub> ***	0.946	0.073*** (0.015-0.139)	0.069
	Other LA	178.692 <sub>(26)</sub> ***	0.596	0.179*** (0.092-0.261)	0.102
	All (n=897)	405.081 <sub>(26)</sub> ***	0.942	0.099*** (0.066-0.132)	0.050
Two factor 2b					
	Colombia	188.237 <sub>(26)</sub> ***	0.748	0.152*** (0.044-0.255)	0.078
	Peru	285.922 <sub>(26)</sub> ***	0.935	0.133*** (0.085-0.181)	0.046
	Venezuela	303.827 <sub>(26)</sub> ***	0.886	0.109*** (0.038-0.167)	0.075
	Other LA	181.352 <sub>(26)</sub> ***	0.597	0.179*** (0.089-0.262)	0.113
	All (n=897)	508.634 <sub>(26)</sub> ***	0.917	0.119*** (0.087-0.151)	0.052

Note: Robust Comparative Fit Index (CFI); confidence interval (CI); degrees of freedom (df); Latin American (LA); Robust Root Mean Square Error of Approximation (RMSEA); Standardized Root Mean Square Residual (SRMR); Chi-square ( $\chi^2$ ).

\*\*\* p < 0.001

Model 1: Originally validated one-factor model of Kroenke [1].

Model 2a: Two-factor model of Krause [2] with item 3, 4 and 5 loaded on one somatic factor and the six remaining items loaded on an affective factor .

Model 2b: Two-factor model of Richardson and Richard [3] with item 3,4,5,7,8 loaded on the somatic factor and four remaining items loaded on an affective factor.

**Table S6.** Convergent validity coefficients of the PHQ-9 and PHQ-2 by immigrant group

	Colombia (n=94)		Peru (n=333)		Venezuela (n=375)		Other LA (n=95)		all (n=897)	
	PHQ-9	PHQ-2	PHQ-9	PHQ-2	PHQ-9	PHQ-2	PHQ-9	PHQ-2	PHQ-9	PHQ-2
PHQ-9	-	0.689***	-	0.828***	-	0.729***	-	0.566***	-	0.714***
PHQ-2	0.689***	-	0.828***	-	0.729***	-	0.566***	-	0.714***	-
GAD-7	0.607***	0.442***	0.643***	0.581***	0.617***	0.459***	0.595***	0.532***	0.625***	0.520***

Note: General Anxiety Disorder 7 items (GAD-7); Latin American (LA); 9-item Patient Health Questionnaire (PHQ-9); 2-item Patient Health Questionnaire (PHQ-2).

\*\*\*  $p \leq 0.001$

## References

1. Kroenke K, Spitzer RL, Williams JB: The PHQ-9: validity of a brief depression severity measure. *J Gen Intern Med* 2001, 16(9):606-613.
2. Krause JS, Bombardier C, Carter RE: Assessment of depressive symptoms during inpatient rehabilitation for spinal cord injury: is there an underlying somatic factor when using the PHQ? *Rehabilitation Psychology* 2008, 53(4):513.
3. Richardson EJ, Richards JS: Factor structure of the PHQ-9 screen for depression across time since injury among persons with spinal cord injury. *Rehabilitation Psychology* 2008, 53(2):243-249.