

# Preliminary reliability and validity of the Spanish Generalized Expectancies for Negative Mood Regulation Scale

Nils Pfeiffer,<sup>1</sup> Vania Martínez,<sup>2</sup> Jack Mearns,<sup>3</sup> Salvatore J. Catanzaro,<sup>4</sup> Graciela Rojas,<sup>5</sup> Matthias Backenstrass,<sup>6</sup> and Annette Kaemmerer<sup>7</sup>

## Suggested citation

Pfeiffer N, Martínez V, Mearns J, Catanzaro SJ, Rojas G, Backenstrass M, et al. Preliminary reliability and validity of the Spanish Generalized Expectancies for Negative Mood Regulation Scale. *Rev Panam Salud Publica*. 2012;31(2):129–34.

## ABSTRACT

**Objective.** This article introduces a Spanish version of the Generalized Expectancies for Negative Mood Regulation Scale (NMR-S) and tests the reliability and the validity of the new questionnaire.

**Methods.** A sample of 360 students from Chile completed the NMR-S along with instruments measuring depressive symptoms, social desirability, coping, and emotion regulation.

**Results.** A factor analysis indicated that the NMR-S has a one-dimensional structure. The reliability of the new instrument was  $\alpha = 0.89$ . The concurrent validity of the NMR-S was supported by correlations with measures of coping, emotion regulation, and depressive symptoms. Furthermore, the NMR-S predicted depressive symptoms when controlling for emotion regulation and coping.

**Conclusions.** The findings are the first evidence to support the reliability and validity of the NMR-S.

## Key words

Mental disorders; mood disorders; personality tests; validation studies as topic; adaptation, psychological; questionnaires; Chile.

Most mental disorders are associated with affective dysregulation. Mood and emotion disturbances are a diagnostic criterion of anxiety, mood, and personality disorders (1, 2). Accordingly, re-

searchers pay increasing attention to the link between psychopathology and affect regulation deficits (3, 4). The Generalized Expectancies for Negative Mood Regulation (NMR) Scale (5) has made important contributions to advances in this area (6–23).

The NMR Scale measures “the expectancy that some behavior or cognition will alleviate a negative mood state” (5). Response expectancies theory (24, 25) makes an important prediction about this construct. According to this theory, expectancies have a self-confirming effect: information that is congruent with an expectancy is given priority over incongruent information during processing. Because of selective processing, perceptions and experiences tend to be consistent with

one’s expected nonvolitional response. Thus, NMR expectancies influence the success of mood regulation strategies: believing that one can engage in strategies to reduce a negative mood makes these strategies more efficacious (26).

Additionally, Rotter’s social learning theory (27) predicts that NMR expectancies influence the likelihood of engaging in attempts at mood repair. When in a negative mood, people with high NMR expectancies should be more likely to use NMR strategies than people with low NMR expectancies. Thus, NMR expectancies should increase the effectiveness and frequency of mood regulation attempts, with the consequence that people with strong NMR expectancies are more successful at regulating their negative

<sup>1</sup> Schoen Klinik Roseneck, Prien am Chiemsee, Germany.

<sup>2</sup> Centro de Medicina Reproductiva y Desarrollo Integral del Adolescente, Facultad de Medicina, Universidad de Chile, Santiago, Chile. Send correspondence to: Vania Martínez, vmartinez@med.uchile.cl

<sup>3</sup> Department of Psychology, California State University, Fullerton, California, United States of America.

<sup>4</sup> Department of Psychology, Illinois State University, Normal, Illinois, United States of America.

<sup>5</sup> Hospital Clínico, Universidad de Chile, Santiago, Chile.

<sup>6</sup> Institut für Klinische Psychologie, Klinikum Stuttgart, Stuttgart, Germany.

<sup>7</sup> Psychologisches Institut, Universität Heidelberg, Heidelberg, Germany.

moods (26). Substantial evidence supports the mood-enhancing effect of NMR expectancies: numerous studies have shown that NMR expectancies correlate negatively with depression, even after controlling for actual coping (6, 26, 28).

The NMR Scale has played a central role in a large number of studies on mental health and mental disorders. In the beginning, these studies used the NMR Scale only with nonclinical samples. For instance, several studies found that NMR expectancies predicted depression and anxiety prospectively in student samples (7–10). Furthermore, empirical evidence indicates that NMR expectancies buffer the negative consequences of stress: using samples of students and police officers, two studies found that greater stress was associated with increasingly more distress and depression when subjects had low NMR expectancies (6, 11).

Another study showed that students' anxiety before an examination had a negative impact on their performance only when their NMR expectancies were low (12). Furthermore, problematic alcohol consumption was found in adults and adolescents with low NMR expectancies (13, 14). To conclude, NMR expectancies have turned out to be an important individual resource protecting against mental health problems.

During the past few years, an increasing number of studies used the NMR Scale with clinical samples. Several publications reported that clinical groups had lower NMR expectancies than controls. This result was observed for patients with eating disorders (15), for patients with major depression (16, 17), for subjects who had attempted suicide (18), and for patients who were being treated for alcohol and drug addiction (19).

Furthermore, NMR expectancies have been found to predict the functional impairment of female survivors of childhood abuse, even when controlling for the influence of symptoms of posttraumatic stress disorder (PTSD) and interpersonal problems (20). A recent study observed that NMR expectancies correlated with the number of mental disorders comorbid to depression. Depressed patients with low NMR expectancies seemed to be at increased risk for comorbidity (17). In conclusion, the studies mentioned suggest that NMR expectancies play an important role in the etiology of mental disorders.

This hypothesis was supported by three psychotherapy studies, in which changes in NMR expectancies were associated with concurrent and future symptom changes. Cloitre and colleagues introduced a cognitive-behavioral treatment for PTSD related to childhood abuse (21). They reported that NMR expectancies increased more in the treatment group than in a wait-list group. Furthermore, increases in NMR expectancies predicted future reductions of PTSD symptoms during treatment (21, 22). Similarly, a longitudinal study on cognitive-behavioral therapy for depression observed that the more NMR expectancies increased during psychotherapy the better were patients' prognoses after termination of treatment (23).

The examples mentioned show that NMR expectancies have received a lot of attention from the research community. However, the opportunity to conduct international research on NMR expectancies is limited. The NMR Scale has been translated into Hebrew (18), German (16, 29), and Japanese.<sup>8</sup> Thus, it is possible to conduct studies on NMR expectancies only with a small fraction of the world population. Spanish is the second most widely spoken language in the world, with 329 million native speakers (30). This article introduces a Spanish version of the NMR Scale, the NMR-S.

The current study assessed the psychometric properties of the NMR-S, including its factor structure and internal consistency. The English language NMR Scale is one-dimensional (5), with a coefficient  $\alpha$  ranging from 0.80 to 0.92 (5, 31). Furthermore, this study sought to validate the NMR-S by testing its construct validity. The NMR-S should correlate negatively with depressive symptoms (26) and have only a modest correlation with social desirability. The reported correlations of the NMR Scale with the Crowne–Marlowe Social Desirability Scale (SDS-CM) (32) range between 0.20 and 0.23 (5). Consistent with previous research, the NMR-S should be related to emotion regulation and coping strategies (26). More precisely, the NMR-S should correlate positively with reappraisal, problem solving, and seeking social sup-

port and negatively with suppression and avoidance. These associations have been reported for the English language NMR Scale (14, 33). The study also tested whether the NMR-S predicted depressive symptoms independently from other constructs. The NMR-S should predict variance in depressive symptoms in a cross-sectional design beyond what is predicted by emotion regulation strategies and coping (6, 26, 28).

To conclude, this article introduces the NMR-S as a Spanish version of the NMR Scale (5). The following study assesses the reliability and validity of the new instrument by means of its internal consistency, its factor structure, its construct validity, and its incremental validity.

## MATERIALS AND METHODS

### Participants

A total of 360 participants completed this study. They were students at the Universidad de Chile and were recruited in seminars or on the university campus. Participants' mean age was 21 years (standard deviation = 2; range = 18–29). Most subjects were female ( $n = 255$ , 70.8%), and a smaller proportion were male ( $n = 100$ , 27.8%; missing:  $n = 5$ , 1.4%). Subjects were informed that participation in the study was voluntary. They provided written informed consent before admission to the study. The study protocol was approved by the ethics committee of the Faculty of Medicine of the Universidad de Chile.

### Measures

Subjects completed questionnaires assessing NMR expectancies, depressive symptoms, social desirability, emotion regulation, and coping.

The NMR-S was developed jointly by native Spanish speakers in Chile, Spain, and the United States of America so the NMR-S would be applicable to populations in several Spanish-speaking countries. Individuals from Chile and Spain independently translated the English language NMR Scale. The two versions were merged into one translation that both translators agreed on. The merged version was back-translated by a Spaniard, and the back-translation was compared with the original English version. In the United States, bilingual individuals proposed slight modifications,

<sup>8</sup> Mearns J, Miyahara E, Tresno F, Watabe Y, Kono K, Takashima E. Creating a Japanese measure of generalized expectancies for negative mood regulation [conference presentation]. At: 21st Annual Association for Psychological Science Convention, San Francisco, California, 22–25 May 2009.

to which the translators from Chile and Spain agreed. To aid comprehension, the instructions were condensed without sacrificing content. The resulting NMR-S consists of 30 items, which all begin with “When I am upset, I believe that . . .” (“Cuando estoy mal de ánimo, creo que . . .”). A sample item is “When I am upset, I believe that I can feel better by doing something creative.” Response options for the items range from 1 (strong disagreement) to 5 (strong agreement). The scale includes 10 items referring to behavioral strategies, 10 items concerning cognitive strategies, and 10 general items.<sup>9</sup>

The second edition of the Beck Depression Inventory (BDI-II) has 21 items assessing symptoms of depression. There is substantial evidence for its reliability and validity in research and clinical practice (34). Participants completed the Chilean adaptation of the BDI-II (35).

The SDS-CM (32, 36) is the instrument most commonly used for measuring a response bias due to social desirability. It contains 23 true–false items describing socially undesired but common behaviors as well as desired but uncommon behaviors. A high score indicates that subjects endorse a number of unlikely responses. The second and the fifth author chose the SDS-CM from Argentina (36) for this study because this instrument seemed to be a sound translation of the SDS-CM that would be well suited for application in a Chilean sample.

The Emotion Regulation Questionnaire (33, 37) measures two kinds of emotion regulation. First, it is possible to modify an emotion by cognitively reappraising the emotion-eliciting event. Second, the emotional response can be controlled by suppressing it.

The Coping Strategy Indicator (38, 39)<sup>10</sup> consists of 33 items comprising three scales. The problem-solving scale includes strategies that directly aim to solve the problems that cause the stressful situation. Seeking support refers to coping by seeking support from the social environment to deal with the situation. Avoidance comprises behaviors to distract oneself from the problem—for instance, daydreaming or fantasizing.

<sup>9</sup> The NMR-S is available from the corresponding author.

<sup>10</sup> Kramp U, Buitrón P, Cartes L, Fernández G, Vargas, G. Adaptación chilena del indicador de estrategias de afrontamiento (CSI) [poster]. At: III Congreso Chileno de Psicología, La Serena, Chile, 5–7 November 2008.

## Statistical analyses

Cronbach’s  $\alpha$  as a measure of internal consistency was used to estimate the reliability of the NMR-S. Single items were analyzed by means of the corrected item-total correlations. As previous studies reported corrected item-total correlations below 0.30 for some of the behavioral and cognitive items of the NMR Scale (26, 29),  $r_{it} \geq 0.20$  was chosen as the criterion for including items in the final NMR-S. In order to investigate the structure of the NMR-S, a common factor analysis was combined with a scree test and parallel analysis (40, 41). The associations between the NMR-S and other measures were tested by means of Pearson’s correlation coefficient. The incremental validity of the NMR-S was analyzed by linear regression analysis.

## RESULTS

### Internal consistency, item analyses, and structure of NMR-S

The internal consistency of the NMR-S was  $\alpha = 0.89$ . Corrected item-total correla-

tions ranged between 0.22 and 0.60, with a mean of 0.43. Table 1 shows that four items had a correlation smaller than 0.30. The corrected item-total correlations differed among the three item groups. The behavioral and cognitive items tended to show smaller correlations with the total scale score than did the general items; only behavioral and cognitive items fell below  $r_{it} = 0.30$  (behavioral: mean  $r_{it} = 0.35$ , range = 0.22–0.44; cognitive: mean  $r_{it} = 0.41$ , range = 0.26–0.56; general: mean  $r_{it} = 0.53$ , range = 0.41–0.60).

The results of a common factor analysis indicated that the NMR-S has a one-dimensional structure (Kaiser–Meyer–Olkin measure of sampling adequacy = 0.89). Table 1 includes factor loadings from the first unrotated factor, illustrating that all items had positive loadings and most had loadings higher than 0.30. The scree test was consistent with the extraction of one factor. The first factor had an eigenvalue of 6.88 and explained 22.94% of the variance. The following factors consistently had eigenvalues around 1 (factor 2: 1.45, factor 3: 1.01, factor 4: 0.87, factor 5: 0.65). Parallel

**TABLE 1. Means, standard deviations, corrected item-total correlations ( $r_{it}$ ), and factor loadings of items of the Spanish language NMR Scale ( $n = 360$ )**

Item	Item group	M	SD	$r_{it}$	Loading <sup>a</sup>
NMR 1	General	4.00	0.95	0.56	0.65
NMR 2	General	4.20	0.88	0.60	0.68
NMR 3 <sup>b</sup>	General	4.17	1.00	0.53	0.61
NMR 4	Cognitive	3.30	1.21	0.26	0.25
NMR 5 <sup>b</sup>	Behavioral	3.77	1.14	0.33	0.33
NMR 6	Behavioral	4.39	0.87	0.34	0.35
NMR 7	Cognitive	3.90	1.13	0.34	0.36
NMR 8 <sup>b</sup>	General	4.03	1.00	0.50	0.55
NMR 9 <sup>b</sup>	Cognitive	3.93	1.14	0.54	0.58
NMR 10	General	3.35	1.13	0.44	0.48
NMR 11 <sup>b</sup>	Behavioral	3.42	1.32	0.44	0.46
NMR 12	Cognitive	3.10	1.17	0.44	0.47
NMR 13	Behavioral	3.72	1.04	0.24	0.24
NMR 14 <sup>b</sup>	General	3.91	1.18	0.59	0.65
NMR 15	Cognitive	4.17	0.90	0.40	0.42
NMR 16	Cognitive	2.53	1.20	0.29	0.33
NMR 17	Behavioral	3.37	1.21	0.22	0.22
NMR 18 <sup>b</sup>	Behavioral	3.88	1.05	0.40	0.41
NMR 19 <sup>b</sup>	General	3.33	1.23	0.41	0.44
NMR 20	General	3.89	0.98	0.51	0.56
NMR 21 <sup>b</sup>	Cognitive	3.73	1.15	0.38	0.43
NMR 22 <sup>b</sup>	Behavioral	3.68	1.11	0.31	0.31
NMR 23	Behavioral	4.15	0.95	0.34	0.33
NMR 24 <sup>b</sup>	General	3.88	1.06	0.54	0.62
NMR 25 <sup>b</sup>	Cognitive	3.38	1.25	0.56	0.61
NMR 26	Behavioral	4.00	1.00	0.40	0.41
NMR 27 <sup>b</sup>	General	3.50	1.24	0.58	0.63
NMR 28 <sup>b</sup>	Cognitive	3.83	1.15	0.47	0.49
NMR 29	Cognitive	3.50	1.14	0.44	0.47
NMR 30 <sup>b</sup>	Behavioral	3.16	1.30	0.44	0.46

**Notes:** M: mean, SD: standard deviation,  $r_{it}$ : corrected item-total correlation, NMR: Negative Mood Regulation.

<sup>a</sup> Factor loadings are on the first unrotated factor extracted using principal axis factoring.

<sup>b</sup> These items are negative and were reversed before statistics were calculated.

analysis also extracted one factor. The 95th percentile random data eigenvalues of the first two factors were 1.66 and 1.55.

**Validity**

The correlation matrix for all study variables is presented in Table 2. As predicted, the NMR-S correlated substantially with symptoms of depression. There was a significant positive correlation with social desirability. The NMR-S correlated positively with reappraisal, problem solving, and seeking support coping and it correlated negatively with suppression and avoidance coping.

Previous research with the English language version of the NMR Scale established that NMR expectancies are positively associated with adaptive or approach coping strategies, independent of other important predictors (6, 26, 28). In this study, the relation between social desirability and NMR expectancies was stronger than that usually found with the English language NMR Scale. Therefore, partial correlations were ex-

amined between the NMR-S and measures of coping and emotion regulation, with social desirability controlled. As shown in Table 3, all partial correlations with social desirability controlled were statistically significant and were of similar magnitude to the zero-order correlations.

Similarly, it is important to demonstrate that associations between NMR expectancies and coping or emotion regulation are independent of current mood state. Accordingly, partial correlations were examined between the NMR-S and measures of coping and emotion regulation, with BDI-II scores controlled. Table 3 displays that the associations between the NMR-S and problem solving and seeking support as well as reappraisal remained significant when controlling for depressive symptoms.

To test the prediction derived from response expectancy theory that NMR expectancies are directly associated with depressive symptoms, a multiple regression analysis tested the incremental validity of the NMR-S as a predictor of

depressive symptoms, independent of coping and emotion regulation strategies. All predictor variables (i.e., NMR expectancies, coping, and emotion regulation strategies) were entered simultaneously in one step. Thus, the effects of coping and emotion regulation strategies on depressive symptoms were statistically controlled for in order to test the independent effect of NMR expectancies on depressive symptoms on statistical significance. The NMR-S predicted BDI-II scores significantly, independently accounting for 17.5% of the variance. In total, the six predictors accounted for 43.8% of the criterion variance. Table 4 presents a summary of this regression analysis.

**DISCUSSION**

The results clearly show that the NMR-S has a one-dimensional structure. This finding matches the results for the English language version (5). The internal consistency of the NMR-S indicates good reliability. The coefficient  $\alpha$  corresponds to results for the English language NMR Scale (26). However, the instrument is not absolutely homogeneous: the corrected item-total correlations of four items fell below 0.30. These items were part of the behavioral and the cognitive item groups. This result is not unexpected. Previous studies on the English and the German NMR Scale consistently reported corrected item-total correlations below 0.30 for some behavioral and cognitive items. The behavioral and cognitive elements of NMR expectancies were more heterogeneous than the general component (26, 29).

The correlations of the NMR-S with depressive symptoms, emotion regulation, and coping were in accordance with the predictions. This finding supports the construct validity of the new instrument. The NMR-S correlated significantly with social desirability, which was not unexpected because believing in one's ability to regulate negative moods is socially desirable. While the effect size of the association was larger than that reported for the English language NMR Scale (5), partial correlation analyses showed that the relations between the NMR-S and the other measures were independent of social desirability. Equivalent analyses replicated this result when depressive symptoms were partialled out. In a test

**TABLE 2. Correlations between Negative Mood Regulation expectancies, social desirability, coping, emotion regulation, and depressive symptoms (n = 346)**

Instrument	Instrument						
	NMR-S	SDS-CM	CSI-PS	CSI-SS	CSI-Av	ERQ-S	ERQ-R
SDS-CM	0.40 <sup>a</sup>						
CSI-PS	0.29 <sup>a</sup>	0.23 <sup>a</sup>					
CSI-SS	0.28 <sup>a</sup>	0.09	0.27 <sup>a</sup>				
CSI-Av	-0.25 <sup>a</sup>	-0.25 <sup>a</sup>	-0.16 <sup>a</sup>	-0.09			
ERQ-S	-0.18 <sup>a</sup>	-0.05	-0.16 <sup>a</sup>	-0.33 <sup>a</sup>	0.21 <sup>a</sup>		
ERQ-R	0.36 <sup>a</sup>	0.13 <sup>b</sup>	0.18 <sup>a</sup>	-0.05	-0.03	0.07	
BDI-II	-0.58 <sup>a</sup>	-0.35 <sup>a</sup>	-0.25 <sup>a</sup>	-0.10	0.42 <sup>a</sup>	0.23 <sup>a</sup>	-0.24 <sup>a</sup>

**Notes:** NMR-S: Spanish language Negative Mood Regulation Scale; SDS-CM: Crowne-Marlowe Social Desirability Scale; CSI-PS: Coping Strategy Indicator, problem solving; CSI-SS: Coping Strategy Indicator, seeking support; CSI-Av: Coping Strategy Indicator, avoidance; ERQ-S: Emotion Regulation Questionnaire, suppression; ERQ-R: Emotion Regulation Questionnaire, reappraisal; BDI-II = Beck depression inventory II.

<sup>a</sup> P < 0.01.

<sup>b</sup> P < 0.05.

**TABLE 3. Partial correlations (r) of the Spanish language Negative Mood Regulation Scale with coping and emotion regulation when controlling for social desirability and depressive symptoms (n = 346)**

Variable (instrument)	r (SDS-CM partialled out)	r (BDI-II partialled out)
Depressive symptoms (BDI-II)	-0.51 <sup>a</sup>	NA
Suppression (ERQ)	-0.17 <sup>a</sup>	-0.06
Reappraisal (ERQ)	0.34 <sup>a</sup>	0.29 <sup>a</sup>
Problem solving (CSI)	0.22 <sup>a</sup>	0.18 <sup>a</sup>
Seeking support (CSI)	0.26 <sup>a</sup>	0.27 <sup>a</sup>
Avoidance (CSI)	-0.17 <sup>a</sup>	-0.02

**Notes:** SDS-CM: Crowne-Marlowe Social Desirability Scale; BDI-II: Beck Depression Inventory II; ERQ: Emotion Regulation Questionnaire, CSI: Coping Strategy Indicator; NA: not applicable.

<sup>a</sup> P < 0.01.

**TABLE 4. Summary of simultaneous regression analysis for variables predicting depressive symptoms (*n* = 347)**

Variable (instrument)	B coefficient	SE B	$\beta$ coefficient
NMR expectancy (NMR-S)	-0.24	0.02	-0.49 <sup>a</sup>
Problem solving (CSI)	-0.12	0.07	-0.07
Seeking support (CSI)	0.16	0.06	0.13 <sup>b</sup>
Avoidance (CSI)	0.51	0.08	0.26 <sup>a</sup>
Reappraisal (ERQ)	-0.06	0.05	-0.05
Suppression (ERQ)	0.20	0.07	0.12 <sup>b</sup>

**Notes:** SE: standard error, NMR: Negative Mood Regulation; NMR-S: Spanish language NMR Scale; CSI: Coping Strategy Indicator; ERQ: Emotion Regulation Questionnaire.

<sup>a</sup> *P* < 0.01.

<sup>b</sup> *P* < 0.05.

of the incremental validity of the NMR-S, the instrument predicted symptoms of depression significantly in a cross-sectional design when controlling for emotion regulation and coping, replicating numerous studies using the English and German versions (6, 26, 28).

In sum, the results of this study suggest that the psychometric properties of the NMR-S are good. However, future research should extend the evidence on the new instrument. First, future studies should investigate its test-retest reliabil-

ity. Second, the sample of this study was quite homogeneous: subjects were students from Chile and most were female. Whether the results of this study generalize to heterogeneous nonstudent samples, to clinical samples, and to Spanish-speaking samples from countries other than Chile remains an open question.

Future studies should provide further evidence on the psychometric properties of the new instrument. If these studies show that the present version of the NMR-S cannot be applied in these

samples, researchers should revise the present version to achieve an instrument that can be applied to Spanish-speaking patients across the globe. At the moment, the results of this study provide the first evidence to support the reliability and validity of the NMR-S. Thus, the NMR-S provides a basis for researchers from Spanish-speaking countries to investigate the link between NMR expectancies and mental health.

**Acknowledgments.** The first two authors contributed equally to this study. The research underlying this article was supported by a scholarship from the Comisión Nacional de Investigación Científica y Tecnológica of Chile awarded to Vania Martínez and a scholarship from the Universität Heidelberg awarded to Nils Pfeiffer. The authors gratefully acknowledge the assistance of the following individuals with different aspects of the translation and back-translation process: Nadia Alvarez, Bruce R. Burningham, Marc Hoerster, Alejo Martínez-Sansigre, and Guadalupe Ramos.

## REFERENCES

- World Health Organization. International statistical classification of diseases and related health problems. 10th revision. Geneva: WHO; 1992.
- American Psychiatric Association. Diagnostic and statistical manual of mental disorders. 4th ed., revised (DSM-IV-TR). Washington, D.C.: APA; 2000.
- Kring AM, Sloan DM. Emotion regulation and psychopathology: a transdiagnostic approach to etiology and treatment. New York: Guilford Press; 2010.
- Gross JJ. Handbook of emotion regulation. New York: Guilford Press; 2007.
- Catanzaro SJ, Mearns J. Measuring generalized expectancies for negative mood regulation: initial scale development and implications. *J Pers Assess*. 1990;54(3-4):546-63.
- Mearns J, Mauch TG. Negative mood regulation expectancies predict anger among police officers and buffer the effects of job stress. *J Nerv Ment Dis*. 1998;186(2):120-5.
- Catanzaro SJ, Wasch HW, Kirsch I, Mearns J. Coping-related expectancies and dispositions as prospective predictors of coping responses and symptoms. *J Pers*. 2000;68(4):757-88.
- Davis RN, Andresen EN, Trosko M, Massman PJ, Lovejoy MC. Negative mood regulation (NMR) expectancies: a test of incremental validity. *Pers Individ Diff*. 2005;39(2):263-70.
- Mearns J. Coping with a breakup: negative mood regulation expectancies and depression following the end of a romantic relationship. *J Pers Soc Psychol*. 1991;60(2):327-34.
- Kassel JD, Bornoalova M, Mehta N. Generalized expectancies for negative mood regulation predict change in anxiety and depression among college students. *Behav Res Ther*. 2007;45(5):939-50.
- Catanzaro SJ. Mood regulation expectancies, anxiety sensitivity, and emotional distress. *J Abnorm Psychol*. 1993;102(2):327-30.
- Catanzaro SJ. Negative mood regulation expectancies, emotional distress, and examination performance. *Pers Soc Psychol Bull*. 1996;22(10):1023-9.
- Catanzaro SJ, Laurent J. Perceived family support, negative mood regulation expectancies, coping, and adolescent alcohol use: evidence of mediation and moderation effects. *Addict Behav*. 2004;29(9):1779-97.
- Kassel LD, Jackson SI, Unrod M. Generalized expectancies for negative mood regulation and problem drinking among college students. *J Stud Alcohol*. 2000;61(2):332-40.
- Gilboa-Schechtman E, Avnon L, Zubery E, Jeczmierni P. Emotional processing in eating disorders: specific impairment or general distress related deficiency? *Depress Anxiety*. 2006;23(6):331-9.
- Backenstrass M, Joest K, Gehrig N, Pfeiffer N, Mearns J, Catanzaro SJ. The German version of the generalized expectancies for negative mood regulation scale: a construct validity study. *Eur J Psychol Assess*. 2010;26(1):28-38.
- Pfeiffer N, Kämmerer A, Mearns J, Catanzaro SJ, Backenstrass M. Generalized expectancies for negative mood regulation and major depressive disorder: the role of previous depressive episodes and comorbid mental disorders. *Psychopathology*. 2011;44:152-7.
- Orbach I, Blomenson R, Mikulincer M, Gilboa-Schechtman E, Rogolsky M, Retzoni G. Perceiving a problem-solving task as a threat and suicidal behavior in adolescents. *J Soc Clin Psychol*. 2007;26(2):1010-34.
- Thorberg FA, Lyvers M. Negative mood regulation (NMR) expectancies, mood, and affect intensity among clients in substance disorder treatment facilities. *Addict Behav*. 2006;31(5):811-20.
- Cloitre M, Miranda R, Stovall-McClough KC, Han H. Beyond PTSD: emotion regulation and interpersonal problems as predictors of functional impairment in survivors of childhood abuse. *Behav Ther*. 2005;36(2):119-24.
- Cloitre M, Koenen KC, Cohen LC, Han H. Skills training in affective and interpersonal regulation followed by exposure. A phase-based treatment for PTSD related to childhood abuse. *J Consult Clin Psychol*. 2002;70(5):1067-74.
- Cloitre M, Stovall-McClough KC, Miranda R, Chemtob CM. Therapeutic alliance, negative mood regulation, and treatment outcome in child abuse-related posttraumatic stress disorder. *J Consult Clin Psychol*. 2004;72(3):411-6.
- Backenstrass M, Schwarz T, Fiedler P, Joest K, Reck C, Mundt C, et al. Negative mood regulation expectancies, self-efficacy beliefs, and locus of control orientation: moderators or mediators of change in the treat-

- ment of depression? *Psychother Res.* 2006; 16(2):250–8.
24. Kirsch I. Response expectancy as a determinant of experience and behavior. *Am Psychol.* 1985;40(11):1189–202.
  25. Kirsch I. Response expectancies: an introduction. In: Kirsch I, ed. *How expectancies shape experience.* Washington, D.C.: American Psychological Association; 1999. Pp. 3–13.
  26. Catanzaro SJ, Mearns J. Mood-related expectancy, emotional experience, and coping behavior. In: Kirsch I, ed. *Expectancy, experience and behavior.* Washington, D.C.: American Psychological Association; 1999. Pp. 67–91.
  27. Rotter JB. *The development and application of social learning theory.* New York: Praeger; 1982.
  28. Catanzaro SJ, Greenwood G. Expectancies for negative mood regulation, coping, and dysphoria among college students. *J Counsel Psychol.* 1994;41(1):34–44.
  29. Backenstrass M, Pfeiffer N, Schwarz T, Catanzaro SJ, Mearns J. Reliabilität und Validität der deutschsprachigen Version der generalized expectancies for negative mood regulation (NMR) scale. *Diagnostica.* 2008; 54(1):43–51.
  30. Lewis MP. *Ethnologue: languages of the world.* 16th ed. Dallas, TX: SIL International; 2009.
  31. Catanzaro SJ, Horaney F, Creasey G. Hassles, coping, and depressive symptoms in an elderly community sample: the role of mood regulation expectancies. *J Counsel Psychol.* 1995;42(3):259–65.
  32. Crowne DP, Marlowe D. A new scale of social desirability independent of psychopathology. *J Consult Psychol.* 1960;24:349–54.
  33. Gross JJ, John OP. Individual differences in two emotion regulation processes: implications for affect, relationships, and well-being. *J Pers Soc Psychol.* 2003;85(2):348–62.
  34. Beck AT, Steer RA, Brown GK. *Manual for the Beck Depression Inventory II.* San Antonio, TX: Psychological Corporation; 1996.
  35. Melipillán Aranedo R, Cova Solar F, Rincón González P, Valdivia Peralta M. Propiedades psicométricas del inventario de depresión de Beck-II en adolescentes chilenos. *Terapia Psicológica.* 2008;26(1):59–69.
  36. Cosentino AC, Castro Solano A. Adaptación y validación Argentina de la Marlowe–Crowne social desirability scale. *Interdisciplinaria.* 2008;25(2):197–216.
  37. Rodríguez-Carvajal R, Moreno-Jiménez B, Garrosa E. 2006. Emotion regulation questionnaire: Spanish version. Available from: <http://spl.stanford.edu/pdfs/erq10-spanish.pdf> Accessed 24 October 2011.
  38. Amirkhan JH. A factor analytically derived measure of coping: the coping strategy indicator. *J Pers Soc Psychol.* 1990;59(5):1066–74.
  39. Amirkhan JH. Criterion validation of a coping measure. *J Pers Assess.* 1994;62(2):242–61.
  40. Horn JL. A rationale and test for the number of factors in factor analysis. *Psychometrika.* 1965;30:179–85.
  41. O'Connor BP. SPSS and SAS programs for addressing interdependence and basic levels-of-analysis issues in psychological data. *Behav Res Methods Instrum Comput.* 2004;36(1): 17–28.

Manuscript received on 23 January 2011. Revised version accepted for publication on 1 August 2011.

## RESUMEN

### Confiabilidad y validez preliminares de la versión en español de la Escala de Expectativas Generalizadas para la Regulación del Ánimo Negativo

**Objetivo.** En este artículo se presenta la versión en español de la Escala de Expectativas Generalizadas para la Regulación del Ánimo Negativo (NMR-S) y se evalúa la confiabilidad y la validez del nuevo cuestionario.

**Métodos.** Una muestra de 360 estudiantes de Chile completó la NMR-S junto con instrumentos dirigidos a medir síntomas depresivos, deseabilidad social, afrontamiento y regulación emocional.

**Resultados.** Un análisis factorial indicó que la NMR-S tiene una estructura unidimensional. La confiabilidad del nuevo instrumento fue de  $\alpha = 0,89$ . La validez concurrente de la NMR-S fue avalada a través de su correlación con las mediciones de afrontamiento, regulación emocional y síntomas depresivos. Asimismo, la NMR-S predijo los síntomas depresivos cuando se controló por la regulación emocional y el afrontamiento.

**Conclusiones.** Los datos presentados son la primera evidencia para avalar la confiabilidad y la validez de la NMR-S.

## Palabras clave

Trastornos mentales; trastornos del humor; pruebas de personalidad; estudios de validación como asunto; adaptación psicológica; cuestionarios; Chile.