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Social Scisearch
PsycINFO
Psychological Abstracts
PSYINDEX
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Edited by
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The Assessment of Multicultural Strength

Design and Validation of an Openness to the Other Affective Domain Inventory

Alejandro César Cosentino and Alejandro Castro Solano

Department of Psychology, Universidad de Palermo, Buenos Aires, Argentina

Abstract. The classification of character strengths and virtues by Peterson and Seligman (2004) includes 24 strengths and 6 virtues. Although the development of this classification was inspired by diverse cultural traditions, no one strength or virtue centrally focused on cultural aspects. Fowers and Davidov (2006) have proposed a new multicultural strength or virtue termed as openness to the other. We developed the Openness to the Other Affective Domain Inventory (OADI), a new 6-item measurement instrument to assess affective attraction to the other, that is, fascination with or attraction to culturally diverse others, and affective aversion to the other, that is, distrust of or disgust with culturally diverse others. The results showed evidence of acceptable reliability, incremental and convergent validity, validity with an external criterion, and known group validity for the OADI. Moreover, a confirmatory factor analysis yielded an expected two-factor model that corresponded to the attraction and aversion dimensions.

Keywords: multiculturalism, positive psychology, test construction

As a consequence of profound economical, technological, and political changes, interconnectivity has become the principal characteristic of the modern world. Globalization in the 21st century is characterized by the absence of barriers and limits to commerce, the advance of information technologies, new locations for enterprises in emerging countries, and the consequential temporary or permanent migration to or from developed countries (Arnett, 2002; Bryant & Law, 2004; Carr, Inkson, & Thorn, 2005; Thomas, 2008).

Migrant individuals (e.g., foreign students) have to face the daily challenges interacting with different individuals in a context of values, traditions, language, and habits that are different from their own in order to effectively adapt to the new culture and succeed in their work or study (Carr, 2010, 2011; Furnham, 2010; Kennedy, Jones, & Arita, 2007; Thomas, 2008).

To successfully adapt to another cultural context, migrant individuals should exhibit cultural adaptation skills known as *cultural competence* (Sue & Sue, 2008). The model of cultural competence presents three aspects: awareness, knowledge, and skills. The main idea underlying the three-component model of cultural competence posits that these three aspects should interact together to successfully adapt to a new cultural context (Hammer, Bennett, & Wiseman, 2003; Klopff, 2001; Lustig & Koester, 1999).

However, Fowers and Davidov (2006) posit that, contrary to the leading aim of cultural competence programs – respect and affirmation of cultural differences – some individuals might use their new cultural skills and knowledge serving purposes different from the ethical aims of multiculturalism or cultural pluralism (Davies, Steele, & Markus, 2008). This might be caused due to the emphasis of the tripartite model of cultural competence on behavior and knowledge that appears to exclude some key aspect of the interaction with culturally different individuals, that is, the emotional or motivational domain (Fowers & Davidov).

Fowers and Davidov (2006) conceptualize *openness to others* as the genuine core of cultural competence, in other words, a specific virtue or strength of character. This positive trait presents an affective domain that represents the most explicit and informative aspect of what implies to be a person who is open to culturally different individuals. It is in the interaction with individuals and elements from diverse cultures that the emotional experience with culturally different individuals is exhibited. In this sense, the cultivation of the virtue of multiculturalism should be the core aspect of multicultural training for those individuals who would work with individuals from other cultures, rather than the simple learning of new skills that could be incorporated as mere additions to their behavioral repertoire. This strength might have an important role in facilitating

Table 1. Brief definition of the 24 character strengths by 6 virtues based on the Peterson and Seligman (2004) values in action classification

Character strength	Brief definition
Wisdom and knowledge	
Perspective	Having a deep judgment on life
Creativity	Having original and useful ideas
Open-mindedness	Considering pros-and-cons of diverse point of views
Love of learning	Searching and finding more and better knowledge
Curiosity	Having a strong desire to know and learn
Justice	
Fairness	Making equitable social judgments
Leadership	Leading people in harmony to success
Teamwork	Engaging in collaborative work with one's own social group
Humanity	
Kindness	Helping people without utilitarian motives
Love	Being close to people that one has affective bonds
Social Intelligence	Knowing what people wish and seek
Transcendence	
Spirituality	Considering that life has a meaning beyond oneself
Gratitude	Feeling and expressing thankfulness
Hope	Being convinced that everything will be fine
Humor	Having a cheerful and serene view of life
Appreciation	Noticing and appreciating the sublime
Temperance	
Forgiveness	Becoming benevolent toward the offender
Self-regulation	Controlling one's own reactions to stimuli
Prudence	Making careful decisions
Humility	Letting one's achievements speak for themselves
Courage	
Bravery	Doing the right thing despite risks
Honesty	Practicing what one preaches
Persistence	Completing tasks despite obstacles
Zest	Feel alive and activated

Notes. Appreciation = Appreciation of beauty and excellence. Teamwork = teamwork or citizenship.

interactions with individuals from other cultures based on cultural respect and affirmation, and promoting the recognition of culturally diverse others as individuals, rather than as mere members of an out-group (American Psychological Association [APA]; 2003; Davies et al., 2008).

Although cultural competence and openness to the other are different constructs, it can be assumed that those individuals with high levels of openness to the other would display an ethical adaptation compatible with the aim of multiculturalism. Thus, a migrant individual who has poorly developed cultural competences in relation to the new host culture but has high levels of attraction and low levels of aversion to the other culturally diverse, this person would be motivated to learn and integrate aspects of different cultures in order to effectively adjust to the new context based on respect of those culturally diverse. On the contrary, a sojourner who exhibits skills perfectly adapted to the host culture but with low levels of openness to the other might use these competences with purposes that do not align with the affirmation of cultural pluralism; this person trained in cultural competence but without commitment

with multicultural ethics might manipulate or exploit individuals from other cultures while appearing culturally sensitive.

Fowers and Davidov (2006) have stated that the openness to the other is a positive trait, and the study of positive traits (character strengths and virtues) has been the cornerstone of positive psychology. Over the last decade, positive psychology has attempted to design and validate the Values in Action (VIA) classification of human virtues and strengths (Fowler, Seligman, & Koocher, 1999; Linley, Joseph, Harrington, & Wood, 2006). The topic of culture has had a foundational role in Peterson and Seligman's (2004) approach to develop their VIA classification, however, none of the classified strengths or virtues focused on cultural aspects (see Table 1). Additionally, empirical studies that use the VIA classification to study the relationships between character traits and cultural psychological aspects have not proliferated. By contrast, Fowers and Davidov (2006) have proposed the study of openness to the other as a new culturally based strength, that is not included in the VIA classification.

It is possible that the strength of multiculturalism has not been included in Peterson and Seligman's (2004) classification, as it was created based on a descriptive qualitative analysis of old cultural and religious texts (Dahlsgaard, Peterson, & Seligman, 2005) that might be critically judged by the current values of the movement of multiculturalism. Fowers and Davidov (2006) have criticized the existing catalogs of virtues. One of the main critics is the risk of these catalogs of being ethnocentric. For instance, Aristotle (one of the authors consulted by Peterson and Seligman) included in his ethics of virtues, male moral and natural superiority over women and the acceptance of slavery, some elements that are clearly against diversity and unacceptable for the ethics of the contemporary culture. Consequently, Fowers and Davidov have posited the need to modify the Aristotle's ethic of virtue in order to incorporate the multicultural perspective and do not consider those ideas as the only base of knowledge.

Although there are other measurement instruments designed to assess cultural constructs (such as cultural competence or cultural intelligence), no specific instrument was available in relation to the positive trait of openness to the other. In consequence, the design and validation of a questionnaire to assess the affective domain of openness to the other, inspired by the proposal of a multicultural strength or virtue (Fowers & Davidov, 2006), has been the main objective of this research. Three studies have been conducted in order to achieve this aim.

Study 1: Calibration of the New Measurement Instrument

This study aims to provide an initial pool of items to develop a measurement instrument to assess the affective domain of openness to the other.

Participants

Sample 1

The convenience sample of general population consisted of 656 participants (391 women) with a mean age of 41.1 years ($SD = 17.2$, age range of 18–85). Participants did not receive any compensation for their participation; they were invited by university students to collaborate in the research study. The students received academic credits for incorporating participants to the sample.

Procedures and Strategy for Analysis

Initial Development

Schweizer (2011) posits that there is a tendency to develop assessment instruments that have moved from tests with

dichotomic and numerous items toward tests with fewer items and multiple responses that have the advantage of generating more homogeneous scales that more probably will survive a confirmatory factorial analysis (CFA). Muck, Hell, and Gosling (2007) explain that assessment instruments should find a balance between psychometric and practical demands. The availability of short scales with acceptable psychometric properties is useful to conduct research studies that need to apply several measurement instruments. According to Burisch (1984), brief scales have the advantage of saving testing time and avoiding participant's boredom and fatigue.

Thus, in the development phase of the new instrument a plethora of items were freely developed (Clark & Watson, 1995; Matsunaga, 2010) inspired by the definitions and examples of the affective/motivational domain of openness to the other (Fowers & Davidov, 2006) in order to subsequently reduce the number to a minimum acceptable, by conducting a factorial analysis (Costello & Osborne, 2005). All items were developed in Spanish, written in first person, and referred to beliefs and emotions concerning the individuals, customs, relationships, and belief systems of other cultures. A pool of 27 items, in a paper-and-pencil format, was provided to participants who were instructed to compare themselves with the descriptions that appeared in each item. Responses were given in a Likert scale rating from 1 (= *very different*) to 5 (= *very similar*).

Analysis of the Pool of Items

An exploratory factorial analysis (EFA) was conducted with the initial pool of items in order to explore its factorial structure and reduce the number of items, as the final aim was to obtain a brief assessment instrument with a clean factorial structure (i.e., a factor structure with mostly small or few cross-loadings; Schmitt, 2011).

There are several aspects to be considered in relation to the factorial analysis, such as type of matrix of association, number of factors to be extracted, and method to rotate factors (Thompson, 2004). As items were responded in a 5-point ordered categorical scale, a polychoric matrix of correlations was used (Holgado-Tello, Chacón-Moscoso, Barbero-García, & Vila-Abad, 2010). However, it should be acknowledge that there are other alternatives to analyze this type of data, such as consider data as continuous (Dolan, 1994; Rhemtulla, Brosseau-Liard, & Savalei, 2012), or conducting item factor analysis (Levy & Svetina, 2011; Svetina & Levy, 2012; ten Holt, van Duijn, & Boomsma, 2010; Wirth & Edwards, 2007).

There are several empirical criteria to determine the number of factors that should be extracted. For instance, the parallel analysis; the minimum average partial test; the Hull method; information criteria; eigenvalues > 1 ; and the scree test, among others (Crawford et al., 2010; Lorenzo-Seva, Timmerman, & Kiers, 2011). A parallel analysis, based on a polychoric matrix of correlations, was chosen for the purpose of this study, as it is considered a robust option to determine the number of factors in scales

consisting of ordered polytomous items (Timmerman & Lorenzo-Seva, 2011).

The correlation matrix of the initial set of items was subjected to an EFA that was performed with the extraction method of principal axis factoring. Oblique rotation was conducted as it is frequent to find correlated dimensions in psychology (Schmitt, 2011). Due to the variety of rotations available (Browne, 2001; Sass & Schmitt, 2010), geomin and Crawford–Ferguson (CF) quartimax rotations were performed as they provide factorial structures similar to the CFA, and this was planned to use next with the scores of the new instrument. Additionally, a CF-equamax rotation was conducted as it produces larger cross-loadings and has been suggested for the development of new scales (Schmitt & Sass, 2011). Finally, solutions were analyzed across different rotation methods.

Results

The results of the parallel analysis based on a polychoric matrix suggested to retain four factors (eigenvalues 9.35, 2.16, 0.82, and 0.48; simulated data 0.51, 0.39, 0.34, and 0.30). The three oblique rotations were analyzed. As factors with fewer than three items after performing the rotation were not considered (Costello & Osborne, 2005), only the two first factors were taken to develop the new assessment instrument. Items loaded on Factor 1 were the same in all rotations; therefore, all those items were selected. Additionally, items from Factor 2 that loaded on this factor along the different rotations were also selected. Finally, items with cross-loadings larger than .30 were dropped. Consequently, Factor 1 was composed by 8 items with item loadings ranging from .55 to .95 (maximum item loading onto the other factor .21) along the 3 rotations, while Factor 2 consisted of 5 items with item loadings ranging from .37 to .76 (maximum item loading onto the other factor .12) along the 3 rotations.

Regarding item content, it was observed that Factor 1 captured the concept of fascination or affective attraction with culturally diverse others and that Factor 2 captured affective disgust, defensiveness, or distrust to the other culturally diverse. These two factors were of substantial theoretical interest because they were consistent with Fowers and Davidov's proposal (2006) of an affective/motivational domain of the virtue of openness to the other.

As one of the objectives of this research was to develop a brief scale, three was considered an acceptable number of items per factor (Costello & Osborne, 2005). A new item selection on the selected 13-item pool was conducted based on the following criteria: (a) simplest wording; (b) meanings that were not similarly expressed in other items that loaded on the same factor in order to maximize the subscales validity (Clark & Watson, 1995); and (c) Cronbach's alpha reliability higher than .70 for subscales.

After considering several plausible alternatives of combination of items that satisfied these constraints, six items that represent different aspects of the each dimension were selected to be included in the inventory, three items

corresponded to the factor capturing the fascination with and attraction to culturally diverse others, termed *affective attraction to the other*, and three items for the factor capturing the distrust of, defensiveness toward, or disgust with culturally diverse others, termed *affective aversion to the other*. This instrument was named *Inventario de Apertura al Otro, Dominio Afectivo (IADA)* in Spanish, that is, *Openness to the Other Affective Domain Inventory (OADI)* in English. The OADI items that correspond to affective attraction to the other are (the original Spanish items are presented in brackets):

- I feel pleasure and fascination when learning the customs of other cultures (Siento placer y fascinación por aprender las costumbres de otras culturas)
- I think it's important to travel to other countries to interact with people from cultures that are different from mine (Creo que es importante viajar a otros países para relacionarme con personas de culturas diferentes a la mía)
- I love being with people who come from another culture and have beliefs that are different from mine (Me fascina estar con personas que vienen de otra cultura y tienen creencias diferentes a las mías)

Items that represent affective aversion to the other are:

- I believe that the beliefs of cultures different from mine are false and inaccurate (Creo que son falsas e inexactas las creencias de culturas diferentes a la mía)
- I do not like interacting with people who have values different from those of my culture (No me gusta relacionarme con gente que tiene unos valores diferentes a los de mi cultura)
- I distrust people who come from a culture different from mine (Desconfío de las personas que son de una cultura distinta a la mía)

The English translation of the six originally Spanish items was done by a professional translator and reviewed by the authors.

Brief Discussion

A short scale to measure the affective domain of the openness to the other culturally diverse was developed. This instrument consists of two dimensions, the affective attraction to the other and the affective aversion of the other. However, it should be considered that having only three items per subscale might involve some difficulties regarding test equivalence across different groups.

Study 2: Initial Validation and Convergent Validity

The aim of this study was to analyze the psychometric properties, confirmatory factor analysis, and convergent

validation of the OADI. Then, some considerations regarding expected associations between openness to the other and specific relevant variables will be presented.

Considering the multicultural strength as character strength, it was expected to find correlations of this variable with (a) life satisfaction; (b) social desirability; and (c) personality according to the Big Five. These hypotheses were based on the previous associations found among these specific variables and the VIA character strengths. More specifically,

Hypothesis 1 (H1): It has been proposed that character strengths should be broadly associated with satisfaction (Peterson & Seligman, 2004), and empirical studies have found this association to life satisfaction (Park, Peterson, & Seligman, 2004).

Hypothesis 2 (H2): The strengths of character were defined as socially desirable (Peterson & Seligman,) and have been found associations with social desirability (Cosentino, 2011; Macdonald, Bore, & Munro, 2008).

Hypothesis 3 (H3): The association between character strengths and Big Five is theoretically relevant (Peterson & Seligman, 2004), and empirical studies have observed that character strengths were associated with dimensions of the Big Five (Macdonald et al., 2008; Peterson & Park, 2004).

For this research, an exploratory approach was used to study the relationship among the dimensions of the affective domain of openness to the other and the dimensions of the Big Five, the personality model more frequently used (John, Naumann, & Soto, 2008). In consequence, no hypotheses were established about these relationships.

Additionally, considering openness to the other as a character strength (Fowers & Davidov, 2006) it was expected to find associations with other character strengths, similar to results found with VIA classification, where character strengths are correlated among themselves (Cosentino, 2009, 2011). Specifically, considering that the construct openness to the other focused on relationships with people, places, language, values, and ideas that differ from one's own, it was expected that the multicultural strength would associate with those character strengths that focus on social and human aspects such as kindness, love, social intelligence (from the humanity virtue of VIA classification; see Table 1) and; fairness, leadership, and teamwork (from justice virtue). It was also expected to find associations between multicultural strengths and those characters that aim at knowledge and contact with life and the world, such as perspective, creativity, open-mindedness, love of learning, and curiosity (from wisdom and knowledge); appreciation and gratitude (from transcendence), and zest (from courage).

Finally, a close relationship was expected between cultural competences and openness to the other, as Fowers and Davidov (2006) mentioned that openness to the others

culturally diverse should be considered as the genuine core of cultural competence.

Participants

Sample 2

A second convenience sample of general population consisted of 532 participants (284 women) with a mean age of 35.8 years ($SD = 14.3$, age range of 18–80). Participants did not receive any compensation for their participation. As for Sample 1, individuals volunteered to participate after they received the invitation that university students done, as part of obtaining academic credits for their courses.

Sample 2a

A subsample of sample 2, that completed a larger number of measurement instruments, consisted of 332 participants (mean age = 33.8, $SD = 13.8$, range 18–74).

Procedures and Strategy for Analysis

The assessment instruments included in the study are presented below:

OADI

This new instrument measures the affective domain of openness to the other and includes two dimensions: Affective attraction to the other and affective aversion to the other.

Satisfaction with Life Scale (SWLS)

This scale is an adaptation of the SWLS scale (Diener, Emmons, Larsen, & Griffin, 1985) into the Spanish language (Castro Solano, 2000) that is used internationally for the measure of wellness as a cognitive component of satisfaction. The SWLS consists of 5 items that are answered using a Likert scale ranging from 1 (= *strongly disagree*) to 7 (= *strongly agree*). A single total mean score represents the degree of satisfaction perceived by the participant, and higher scores correspond to a greater satisfaction with life. A number of empirical studies have demonstrated reliability and validity of this scale (Diener et al., 1985; Diener & Larsen, 1993; Larsen, Diener & Emmons, 1985). In this sample, $\alpha = .85$ was observed.

Marlowe-Crowne Social Desirability Scale (MCSDS)

Participants completed an Argentinian adaptation of the MCSDS full-scale (Escala de Deseabilidad Social de

Crowne y Marlowe, in Spanish, Cosentino & Castro Solano, 2008a) originally developed by Marlowe and Crowne. This paper-and-pencil format scale consisted of 33 items to measure social desirability that were answered by *true* (V) or *false* (F), that is, the need for acceptance or approval of others by responding in a culturally appropriate and acceptable manner (Crowne & Marlowe, 1960). An overall total score was calculated for the MCSDS; higher scores represent higher levels of social desirability. The Argentinian MCSDS adaptation has shown acceptable internal consistency, and convergent, divergent, differential, and known-group validities (Cosentino & Castro Solano). In this sample, the internal consistency for the MCSDS was $\alpha = .80$.

Big Five Inventory (BFI)

The BFI was developed by O.P. John to measure the Big Five personality model (Castro Solano, 2005). We used an adapted version of the BFI (Castro Solano & Casullo, 2001) for the Argentinian population to measure the dimensions of the Big Five model. The BFI consists of 44 items that measure the Big Five personality traits: extraversion, agreeableness, conscientiousness, neuroticism, and openness to experience. A general statement, *I see myself like someone...*, is added with the statement of each item to produce a specific sentence to be answered. Examples of the items include *who likes to talk* or *is curious about things*. The BFI items are answered with a scale of 5 response options, ranging from 1 (= *strongly disagree*) to 5 (= *totally agree*). The author of this inventory showed its validity and reliability in groups of US general adult populations. Argentinian studies verified the factorial validity of the inventory for adolescents, adults, and military populations (Castro Solano; Castro Solano, & Casullo). An internal consistency for the five factors in this sample was observed: openness to experience, $\alpha = .81$; neuroticism, $\alpha = .76$; extraversion, $\alpha = .75$; conscientiousness, $\alpha = .80$; and agreeableness, $\alpha = .76$.

Strengths of Character Inventory (SCI)

The SCI (IVyF in Spanish, Cosentino & Castro Solano, 2008b) is a self-rating scale that was used to measure the strengths of character according to the Peterson and Seligman (2004) classification and definitions. The SCI has a paper-and-pencil format and asks participants to indicate the degree in which they consider themselves similar to one of two self-descriptions: One with the presence of character strength and the other with an absence of character strength. Participants responded to all bipolar items on a five-point Likert scale ranging from 1 (= *I am very much like the 1st person*) to 5 (= *I am very much like the 2nd person*). One-half of the 24 items were reversely scored. The higher the score, the greater the presence of the character strength. The SCI showed an acceptable temporal stability with *rs* in the range from .72 to .92, $M = .80$ (Cosentino, 2009). Cosentino and Castro Solano (2012) have shown

psychometric properties of the SCI with an Argentinian adult population. In the present study, the internal consistency of the SCI that included 24 items was $\alpha = .81$, which represented a degree of correlation, but not dimensionality, of the item responses (Helms, Henze, Sass, & Mifsud, 2006).

Cultural Competencies Inventory (CCI)

The CCI (Inventario de Competencias Culturales in Spanish, Castro Solano, 2012) is a new inventory that assesses the five dimensions of intercultural contact that are relevant to cultural and psychological adaptations of temporary residents (sojourners). The CCI consists of 34 items that are responded on a 5-point Likert scale ranging from 1 (= *strongly disagree*) to 5 (= *strongly agree*). The five dimensions measured by the CCI include: openness to new cultural experiences; acceptance of cultural diversity; independence and autonomy; relationships; and emotional instability. The scale showed acceptable reliability and validity, and a CFA indicated a good fit of the data to the five-factor model of the CCI. An internal consistency for this sample was observed: experiences, $\alpha = .73$; diversity, $\alpha = .78$; autonomy, $\alpha = .73$; relationships, $\alpha = .82$; and instability, $\alpha = .77$.

Sociodemographic Data

Participants had to report demographic data, such as sex and age.

Results

Initial Validation

Descriptive Statistics and Reliability

The Cronbach's alpha internal consistency of the OADI was acceptable for both scales and the affective attraction and affective aversion scales negatively correlated with one another (see Table 2). The mean score for the affective attraction was 11.4, $SD = 2.7$, and the mean score for affective aversion was 5.4, $SD = 2.5$. Affective aversion was emphasized by its relationships with the demographic variables: Men scored higher than women on affective aversion, $t(530) = 2.49$, $p = .013$, and age was positively associated with affective aversion, $r = .10$, $p = .024$.

OADI Confirmatory Factor Analysis (CFA)

For the purposes of assessing the factor models, polychoric correlations were used with diagonally weighted least squares (DWLS) to estimate the CFA models based on Likert-type items of OADI (Yang-Wallentin, Jöreskog, & Luo, 2010). Each model was identified by fixing one of the regression paths leading from each factor to a set of

Table 2. Correlations among both dimensions of the OADI scale and a series of relevant variables

	Attraction	Aversion
Sample 2 (<i>n</i> = 532)		
Attraction	(.79)	
Aversion	-.33*** [-.50]	(.74)
Life satisfaction	.17***	-.10*
Social desirability	.11**	-.03
Openness	.33***	-.24***
Extraversion	.19***	-.16***
Conscientiousness	.19***	-.05
Neuroticism	-.11*	.07
Agreeableness	.10*	-.16***
Sample 2a (<i>n</i> = 332)		
Zest	.27***	-.13*
Perspective	.24***	-.17**
Love of learning	.22***	-.18**
Social intelligence	.21**	-.13*
Leadership	.19**	-.21***
Forgiveness	.19**	-.18**
Appreciation	.16**	-.13*
Fairness	.16**	-.31***
Bravery	.16**	-.06
Kindness	.15**	-.18**
Humor	.15**	-.16**
Curiosity	.14*	-.18**
Creativity	.13*	-.07
Love	.13*	-.20***
Gratitude	.13*	-.20***
Teamwork	.13*	-.19***
Hope	.13*	-.13*
Persistence	.11*	-.10
Self-regulation	.11*	-.02
Honesty	.08	-.16**
Prudence	.08	-.15**
Open-mindedness	.06	-.17**
Experiences	.52***	-.34***
Diversity	.48***	-.48***
Relationships	.33***	-.31***
Autonomy	.15**	.02
Instability	-.08	.14*

Notes. OADI = Openness to the Other Affective Domain Inventory; attraction = affective attraction to the other; aversion = affective aversion to the other. The values in parentheses are scale reliabilities. Values in brackets, next to the correlation between attraction and aversion, correspond to the correlation between these latent variables. * $p < .05$. ** $p < .01$. *** $p < .001$.

observed variables to a value of one. Two CFA were conducted: (a) a first analysis with two factors corresponding to the affective attraction and affective aversion and (b) a second analysis with one factor. The latter analysis was performed as the affective attraction to the cultural diverse might constitute a single factor, for example, as a factor ranging from one extreme with affective attraction to the other extreme with affective aversion. In line with the

EFA results, it was expected that the two-factor solution would better fit than a hypothetical one-factor model.

A series of fit indices were considered (Schweizer, 2010). The CFA results for the OADI were (a) $\chi^2(8) = 9.43$, *ns*, normed $\chi^2 = 1.18$, Tucker-Lewis index (TLI) = .999, CFI = 1.000, and RMSEA = .02 for the two-factor model and (b) $\chi^2(9) = 353.24$, $p < .001$, normed $\chi^2 = 39.25$, TLI = .854, CFI = .913, and RMSEA = .268 for the one-factor model. The two-factor model results were interpreted as a good model fit of the data for the OADI, which consisted of affective attraction to the other and affective aversion to the other as the extracted dimensions in the EFA. However, the one-factor model results were considered as a poor model fit; evidence of misspecification was associated with modification indexes > 10 for all the residual covariances, ranging from 18.89 to 74.93. Consequently, it was decided to retain the two-factor model.

Convergent Validity

Life satisfaction (SWLS)

Life satisfaction was positively associated with affective attraction and negatively associated with affective aversion (see Table 2).

Social Desirability (MCSDS)

The strength of openness to the other (affective attraction dimension) was associated with social desirability (see Table 2).

Personality Traits (BFI)

It was consistently observed that multicultural strength was associated with several personality factors (see Table 2). Specifically, the affective attraction to the other scale was statistically significantly associated with all Big Five factor scales: All personality factors were positively associated, except for neuroticism, which was negatively associated (see Table 2). In comparison to the other Big Five factors, the openness to experience factor showed the highest association with affective attraction and affective aversion dimensions.

Character Strengths (SCI)

The character strength of openness to the other was associated with the character strengths of the VIA classification (see Table 2). The affective attraction to the other was positively associated with most of the VIA character strengths (19 of 24), whereas the affective aversion to the other was negatively associated with most of the character strengths (18 of 24).

Cultural Competences (CCI)

The dimensions of openness to the other were associated with the dimensions of cultural competence (see Table 2). Generally, the associations between these constructs were higher than the associations between multicultural strength and the remaining variables in this study. All associations were positive between the affective attraction dimensions and cultural competence factors.

Brief Discussion

Regarding factorial validity, CFA results show that the structure of the scale consisted of two factors is an acceptable solution. In relation to the convergent validity, none of the associations between the dimensions of openness to culturally diverse others and the character strengths were high due to cultural aspects that are not explicitly considered in the VIA classification. Regarding character strengths, these are associated with satisfaction with life. Consistently, openness to culturally diverse others was associated to life satisfaction. Openness to the other was also associated with social desirability, which was expected as positive traits are socially desired. However, it is important to note that this relationship showed an effect size close to small, which could be important for the concern regarding social desirability bias of the researchers who study cultural matters. In relation to cultural competences dimensions, it was assumed that the high intensity and the positive direction of this relationship were partially a consequence of the conceptual closeness between both cultural constructs, based on Fowers and Davidov (2006) proposition of reconceptualization of cultural competence as openness to the other.

Study 3: External Criterion and Incremental Validation

The aim of this study was to investigate the OADI external criterion validity and incremental validity.

The hypotheses related to contact theory have empirically supported the following ideas:

Hypothesis 4 (H4): In general, face-to-face interactions between members of different groups are related to prejudice reduction (Pettigrew & Tropp, 2000).

Hypothesis 5 (H5): Prejudiced individuals avoid contact with out-groups (Herek & Capitanio, 1996; Pettigrew & Tropp, 2006).

Therefore, it was assumed that individuals who traveled to foreign countries would present more openness to the other – higher affective attraction to the other and lower affective aversion to the other – than those individuals who have not traveled abroad.

Participants

Sample 3

A convenience sample of military population consisted of 379 participants (33 women) with a mean age of 25.4 years ($SD = 7.1$, age range of 18–51). Out of this sample (259 cadets and 120 officers), 260 participants reported that they had never traveled to other countries, whereas 119 reported that they have been abroad. This sample was recruited by the military authorities request for participation to military university students and military officials. Military authorities informed participants that data only would be used for an academic research study. None of the participants of this sample received any benefit for inclusion in this study.

Sample 3a

It is a subsample of the sample 3 constituted of 119 participants that have traveled to other countries for leisure or family matters ($n = 23$), for work or study ($n = 57$), and for peacekeeping missions ($n = 36$).

Procedures and Strategy for Analysis

To study the external criterion validity, the known-groups technique was used: Openness to the other was compared between military individuals that have never traveled to other countries and their counterparts that have traveled to other countries. Additionally, the relationships among both dimensions of openness to the other and adaptation to foreign countries from individuals that traveled abroad, and desire or denial to travel in peacekeeping missions were analyzed.

In order to analyze incremental validity of OADI, cultural competences and character strength predictor variables were included. In this way, OADI would explain attitudes toward traveling abroad and adaptation to foreign countries, beyond these variables.

The assessment instruments included in this study are presented below:

OADI

This is a new instrument to measure the affective domain of openness to the other. The internal consistency of the OADI for the military sample was $\alpha = .82$ for affective attraction and $\alpha = .76$ for affective aversion.

SCI

This inventory to measure 24 VIA character strengths was previously presented.

CCI

This instrument to measure cultural competencies was previously presented.

Military Internationalism Scale (MIS)

We used an ad hoc scale to measure the attitudes toward travel in peacekeeping missions for the military populations, which was termed *military internationalism*. Respondents had to rate whether a series of thoughts were similar to or different from what the person thought, using a Likert scale ranging from 1 (*very different*) to 5 (*very similar*). The scale consists of eight items: Four items were related to a dimension of desire to travel in peacekeeping missions (translated sample item: *My professional goal is to participate in a peacekeeping mission*), and four items were related to a dimension of denial of traveling in peacekeeping missions (translated sample item: *I do not want to leave my country to participate in a peacekeeping mission*). The scree plot of the EFA of the scores in the sample of 189 military suggested the extraction of two factors, which correspond to the dimensions of desire and denial to travel in peacekeeping missions. A CFA conducted with another sample of soldiers ($n = 190$) showed a higher fit for a 2-factor model, $\chi^2(19) = 34.54$, $p < .05$, $\chi^2/df = 1.82$, GFI = .955, CFI = .961, SRMR = .055, and RMSEA = .066, compared with a one-factor model, $\chi^2(20) = 101.03$, $p < .001$, $\chi^2/df = 5.05$, GFI = .857, CFI = .794, SRMR = .097, and RMSEA = .146. The internal consistency reliability for the sample of this study was for the dimension of desire to travel in peacekeeping missions, $\alpha = .71$, and for the dimension of denial to travel in peacekeeping missions, $\alpha = .79$.

Foreign Country Adaptation Scale (FCAS)

The FCAS is a short ad hoc inventory designed to measure adaptation to foreign countries. The items referred to the degree of adaptation of the participant in relation to language, social relations, customs, and geography of the country the person visited (translated sample item: *My adaptation to cultural norms and customs of the country I travelled was...*). This 4-item questionnaire was answered using a Likert scale ranging from 1 (*bad*) to 5 (*excellent*). The scree plot of the EFA suggested the existence of a single factor, and a CFA showed an acceptable fit for this one-dimensional scale, $\chi^2(2, n = 104) = 3.54$, ns , $\chi^2/df = 1.77$, GFI = .983, CFI = .992, SRMR = .023, and RMSEA = .086. The internal consistency reliability for this sample was $\alpha = .87$.

Sociodemographic Data

Participants had to report demographic data, such as sex and age and information regarding traveling to foreign countries.

Results

External Criterion

Initially, we used the known-groups technique with participants from sample 3 ($n = 379$). The military personnel who traveled to foreign countries scored higher in affective attraction to the other, $t(377) = 2.87$, $p < .01$, but lower in affective aversion to the other, $t(377) = 2.34$, $p < .05$, in comparison to soldiers who have never traveled to foreign countries.

Secondly, the military population was studied for the convergence of the OADI scores with the FCAS scores of individuals who traveled to other countries (sample 3a, $n = 119$), and with MIS scores (sample 3, $n = 379$). The results showed that adaptation to foreign countries was positively associated with affective attraction to the other ($r = .42$, $p < .001$) and negatively associated with affective aversion to the other ($r = -.28$, $p < .01$) for those soldiers who traveled abroad. Regarding the attitude to work in peacekeeping missions, affective attraction was positively associated with desire ($r = .18$, $p < .001$) but negatively associated with rejection ($r = -.31$, $p < .001$) to travel in peacekeeping missions. Conversely, affective aversion was positively associated to the rejection to travel in peacekeeping missions ($r = .26$, $p < .001$) and negatively associated to the desire to travel in identical missions ($r = -.14$, $p < .01$).

Incremental Validity

The military personnel (sample 3, $n = 379$; and sample 3a, $n = 119$) was studied for the incremental validity of OADI. A hierarchical regression analysis was conducted in order to examine OADI incremental validity. Three blocks of variables were included. A stepwise procedure was used for the first and the second blocks (Hunsley & Meyer, 2003), and both dimensions were simultaneously introduced in the third block. In the first block, five dimensions of the CCI were included; in the second block, the 24 character strengths were entered and in the third block the two affective dimensions of the OADI were included (Smith, Fischer, & Fister, 2003). As shown in Table 3, the openness to the other's affective attraction accounted for an additional amount of variance of the relevant outcomes (i.e., desire to travel to another country, rejection to travel to another country, and the adaptation to foreign countries), beyond effects were attributable to the cultural competencies and the character strengths.

Brief Discussion

First, results from the known-groups technique support the validity of known groups for the OADI. Second, the relationship among the affective domain of openness to the other and the adaptation to foreign countries of individuals who traveled to other countries and the attitude to travel abroad suggest that a higher strength of multiculturalism is associated with (a) a greater adjustment to foreign countries, and (b) a

Table 3. Incremental validity of OADI: Standardized regression weights in a hierarchical regression analysis in the military sample

Block	Predictor	Model 1	Model 2	Model 3
Sample 3 ($n = 379$) Desire to travel with peacekeeping missions				
1.	Experiences	.29 ^{***}	.26 ^{***}	.21 ^{***}
2.	Humor		.13 ^{**}	.12 [*]
	Humility		-.11 [*]	-.12 [*]
3.	Attraction			.13 [*]
	R	.29	.34	.35
	ΔR^2		.03	.01
	F	35.20 ^{***}	15.81 ^{***}	10.70 ^{***}
Rejection to travel with peacekeeping missions				
1.	Relationships	-.12	-.11	-.09
	Instability	.12 [*]	.08	.07
	Experiences	-.13 [*]	-.13 [*]	-.05
2.	Honesty		-.16 ^{**}	-.14 [*]
	Social Intelligence		.17 ^{**}	.15 [*]
	Love		-.13 [*]	-.10
3.	Attraction			-.20 ^{***}
	R	.30	.36	.41
	ΔR^2		.05	.04
	F	11.96 ^{***}	9.47 ^{***}	9.47 ^{***}
Sample 3a ($n = 119$) Adaptation to foreign countries				
1.	Relationships	.20 [*]	.13	
3.	Attraction		.27 ^{**}	
	R	.20	.31	
	ΔR^2		.06	
	F	4.68 [*]	4.08 ^{**}	

Notes. Exclusively for Block 1 (cultural intelligence dimension) and Block 2 (character strengths) a stepwise procedure was applied. Results from the last step of this stepwise procedure are presented by Block. In the case of Block 3, both dimensions of the affective domain of openness to diverse others were included in the procedure. * $p < .05$. ** $p < .01$. *** $p < .001$.

less negative and more positive attitude toward work in other countries. Third, incremental validity tests show that the affective domain of openness to the other explains a portion of the individuals' attitude to travel in peacekeeping missions and the adaptation to foreign countries, beyond what can be predicted by cultural competences and character strengths (Hunsley & Meyer, 2003). Fourth, the incremental validity results show that of these affective dimensions, the aversion dimension does not possess a predictive validity in the context of attraction dimension. It should be noted that the importance of both dimensions of the affective domain of openness to the other might vary with other criterion variables and/or other participants (e.g., diplomats) to determine the incremental validity of the OADI. Finally, the strategy of including both aspects of the affective domain could be considered crucial to maximize the incremental validity of the OADI (Smith et al., 2003).

Final Discussion

The present study indicates (a) the development of a self-report measure for the affective domain of openness to

the other construct (Fowers & Davidov, 2006) and (b) evidence of acceptable reliability, convergent validity, validity with an external criterion, incremental validity, and known-group validity for the OADI. The affective domain of openness to the other is constituted by two dimensions: The affective attraction to the other, that is, the fascination with or attraction to culturally diverse individuals, and affective aversion to the other, that is, distrust of, defensiveness toward, or disgust with culturally diverse others. Additionally, it should be noted that an EFA, which is an exploratory technique, has yielded a two-factor structure that a subsequent CFA of another sample supports.

Although the results of this study show that the OADI is a reliable and valid scale, several studies could be performed to continue exploring its psychometric properties. In this sense, the OADI as a self-report measure is particularly relevant to study the convergent validity between the scores of participants and observers. Due to the particular composition of OADI with three items by dimension, it would be pertinent to conduct a multiple-group confirmatory factor analysis across groups in order to study the measurement invariance of this new scale. Moreover, future studies should assess the predictive validity of the OADI.

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Alejandro César Cosentino

Department of Psychology
Universidad de Palermo
Mario Bravo 1259
Buenos Aires C1175ABW
Argentina

E-mail acosen3@palermo.edu; alejandrocosenin@hotmail.com.ar

Date of acceptance: October 4, 2013

Published online: December 16, 2013